Remedial Action Construction Summary Report

Support Facility Modifications

McCormick & Baxter Creosoting Company

Portland, Oregon

May 2006

Task Order No. 71-03-21

1278860

1278860

DEQ
State of Oregon
Department of
Environmental
Quality

&

ecology and environment, inc.

Remedial Action
Construction Summary Report

Support Facility Modifications

McCormick & Baxter
Creosoting Company
Portland, Oregon

Task Order No. 71-03-21

May 2006

Prepared for:

OREGON DEPARTMENT OF ENVIRONMENTAL QUALITY
811 Southwest Sixth Avenue
Portland, Oregon 97204

Table of Contents

Section **Page**

Table of Contents (Cont.)

Section **Page**

List of Tables

Table

[none]

List of Figures

Figure

List of Acronyms

AASHTO	American Association of State Highway and Transportation
AISC	American Institute of Steel Construction
ASTM	American Society for Testing and Materials
AWWA	American Water Works Association
CFR	Code of Federal Regulations
COP	Construction Operations Plan
CQAP	Construction Quality Assurance Plan
CSR	Construction Summary Report
DEA	Dean Evans and Associates
DEQ	Oregon Department of Environmental Quality
DIP	Ductile Iron Pipe
E & E	Ecology and Environment, Inc.
EPA	United States Environmental Protection Agency
ESA	Endangered Species Act
ESD	Explanation of Significant Difference
McCormick & Baxter	McCormick & Baxter Creosoting Company, Portland Plant
MBI	Morse Bros., Inc.
NEC	National Electric Code
NEMA	National Electrical Manufacturers Association
NFPA	National Fire Protection Association
NOAA	National Oceanic and Atmospheric Administration
NOAA Fisheries	National Oceanic and Atmospheric Administration National Marine Fisheries
NPDES	National Pollutant Discharge Elimination System
NPL	National Priorities List
NSF	National Science Foundation
ODOT	Oregon Department of Transportation

List of Acronyms (Cont.)

OSHA	Occupational Safety and Health Administration
PAHs	polynuclear aromatic hydrocarbons
PCP	pentachlorophenol; Pollution Control Plan
PVC	Polyvinylchloride
QA	quality assurance
QC	quality control
RA	remedial action
RAOs	remedial action objectives
RCRA	Resource Conservation and Recovery Act
RD	remedial design
ROD	Record of Decision
SWPPP	Stormwater Pollution Prevention Plan
UBC	Uniform Building Code
V	Volt

1 Introduction

Ecology and Environment, Inc., (E & E) under contract with the Oregon Department of Environmental Quality (DEQ), has prepared this Remedial Action (RA) Construction Summary Report to document remedial actions implemented to address contaminated soil and groundwater at the McCormick & Baxter Creosoting Company, Portland Plant (McCormick & Baxter) Superfund Site in Portland, Oregon (Figure 1-1).

This document has been prepared under DEQ Task Order No. 71-03-21, which concerns implementation of Remedial Design (RD)/Remedial Action (RA) activities at the site in accordance with the remedy described in the *Record of Decision* (ROD; EPA/DEQ 1996), the March 1998 *ROD Amendment* (EPA/DEQ 1998), and the August 2002 *Explanation of Significant Difference* (ESD; EPA/DEQ 2002). This report documents RA activities associated with the installation of the soil remedy in the support area of the site and subsequent reconfiguration of the support facility buildings, utilities, and parking area (i.e., the 'Support Facility Modifications'). These activities are components of the overall implementation of the soil remedy identified in the ROD (see Section 1.2, below).

1.1 Remedial Action Overview

Implementation of this final portion of the upland soil RA occurred in three phases and were completed under three separate contracts. The phases consisted of: demolition and removal of existing structures and debris; modification of the support facility area, documented herein; and construction of an upland cap. Construction summaries of the other two phases (i.e., demolition and removal and upland cap) are covered in separate construction summary reports (CSRs), submitted under separate cover: *Upland Cap Construction Summary Report* (E & E 2006); and *Demolition and Removal Construction Summary Report* (E & E 2006).

The first phase (demolition and removal) prepared the site for construction of the upland cap by the demolition and removal of existing structures such as the maintenance shop building, multiple above ground storage tanks, and utilities; and further prepared the site by removal of miscellaneous debris. The second phase (support facility modifications) involved placement of two feet of clean soil

in the support area of the site (per requirements of the ROD); installation of a new maintenance shop building; installation of a hazardous material storage area; installation of utilities for ongoing activities at the site; and installation of an asphalt pad within the support area. The final phase (upland cap) completed the soil remedy within the upland portion of the site and included the installation of an impermeable cap within the barrier wall area and a two-feet thick soil cap for the remainder of the site.

The initial project plan and construction sequencing was to have the phases completed serially and not concurrently. The modifications to the support area were to be completed prior to the initiation of construction activities related to the upland cap. However, delays created changes in the project plan and sequence. As such, some of the construction activities associated with the support facility modifications were performed simultaneously with the upland cap construction and some components were transferred to upland cap contract (e.g., asphalt and fencing within support area), which was awarded to the same general contractor.

1.2 Site Location and Description

Located on the east bank of the Willamette River near river mile 7, the site encompasses approximately 41 acres on land and 23 acres in the river. The site is situated downstream of Swan Island and upstream of St. John's Bridge. The upland portion is on a terrace of imported sand fill (dredged material placed in the early 1900s) within the floodplain of the Willamette River. The upland area is generally flat and lies between a 120-foot-high bluff along its northeastern border and the crest of a graded bank approximately 20-feet above the Willamette River to the southwest.

An elevated rail line owned by Burlington Northern Railroad borders the northwestern property line. The northeastern property line is bordered by a rail line owned by the Union Pacific Railroad. The site's southern most property line is bordered with a vacant industrial property. The entire perimeter of the property is fenced, and warning signs are posted on the fence. Residents are situated along the top of bluff overlooking the site.

The property is accessed via the partially paved North Edgewater Street, which leads from Willamette Boulevard to the main gate near the northwest corner of the site.

1.2 Site Background and ROD Requirements

McCormick & Baxter was founded in the early 1940s to produce a variety of treated wood products during World War II. Various wood treatment processes were used at the site including pentachlorophenol (PCP), creosote formulations, ammoniacal copper/zinc arsenate, a copper/chromium/arsenic formulation, and Cellon. Site investigation between 1983 and 1990 revealed many releases of chemical compounds to soil, groundwater, and sediment. Contaminants detected

at the site include polynuclear aromatic hydrocarbons (PAHs, comprising about 85% of creosote constituents), PCP, arsenic, chromium, copper, and zinc. In 1990, the wood treatment operations ceased and early remedial actions were initiated to remove process equipment, piping, tanks, treatment formulations, and other items.

The ROD identifies selected remedies for contaminated soil, sediment, and groundwater. Over the past several years, a number of inspections, investigations, and RAs have been performed at the site. For a comprehensive overview of the site background and ROD requirements, refer to the *Upland Cap Construction Summary Report* submitted under separate cover by E & E (E & E, 2006).

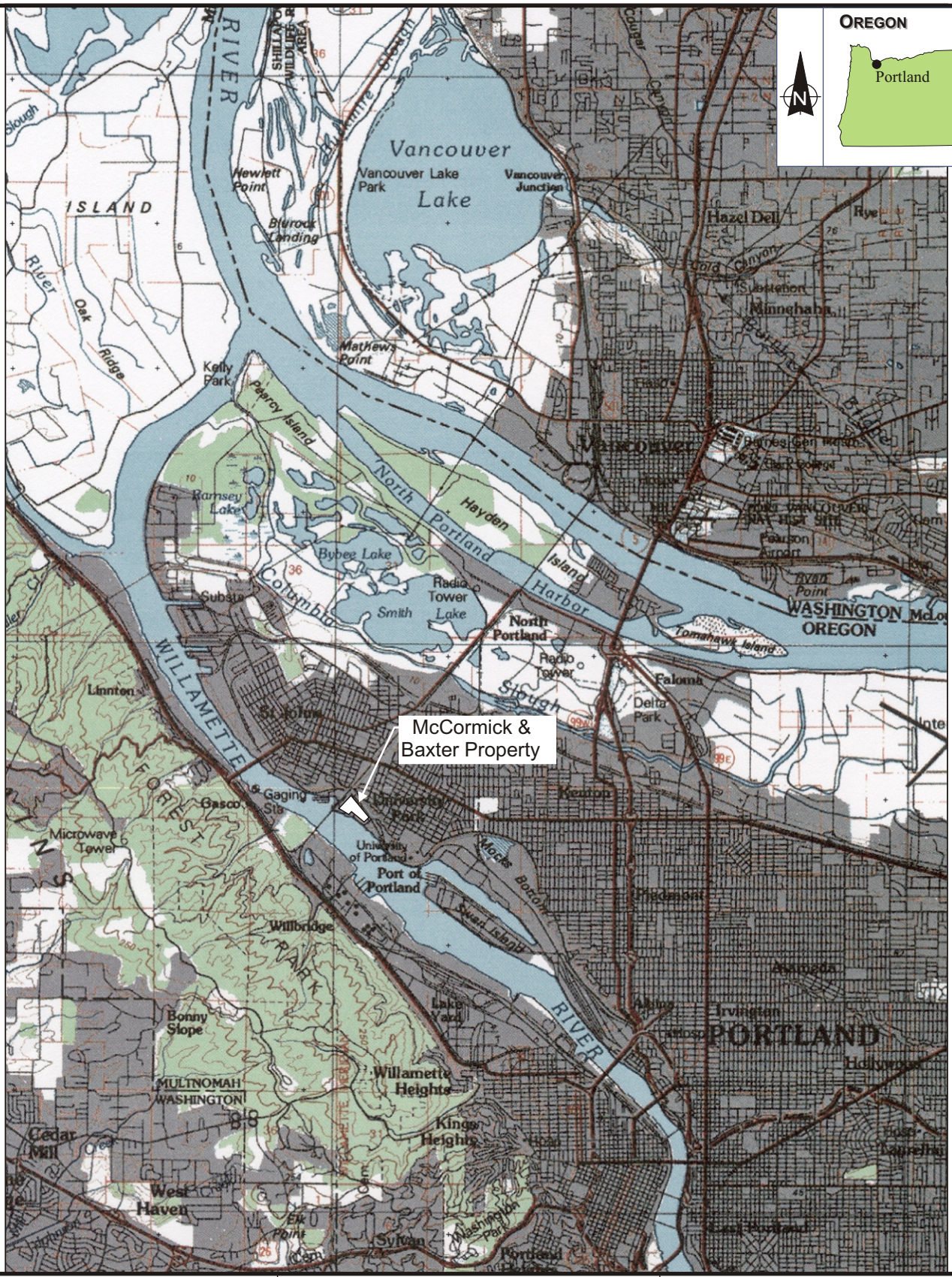
1.3 Report Objectives and Organization

The purpose of this report is to:

- Provide a summary of the RA site activities performed, including descriptions of construction methods;
- Explain modifications made during the RA to the original RA, including a discussion of why changes were made;
- Present the daily reports provided to DEQ:
- Present a chronology of major events;
- Present Record Drawings showing the new site layout; and
- Document RA construction quantities and costs.

The organization of this report is as follows:

- Section 2 provides the details of the RA implementation including contracting and subcontracting; a summary of pre-construction and construction activities; change orders and project deviations; health and safety; community relations; documentation; and a chronology of major events;
- Section 3 documents RA construction quantities and costs; and
- Section 4 lists the references used to complete this report.



ecology and environment, inc.
International Specialists in the Environment
Portland, Oregon

McCORMICK AND BAXTER
CREOSOTING COMPANY SITE
Portland, Oregon

Figure 1-1

SITE LOCATION MAP

Date:
1-9-06

10:002688OY212903\fig 1-1.cdr

2 Remedial Action Implementation

The following subsections provide details of the RA implementation including contracting and subcontracting; pre-construction activities; construction activities, change orders and project deviations, health and safety, community relations, documentation, and chronology of major events.

2.1 Contracting and Subcontracting

E & E, under contract with DEQ, provided environmental engineering and consulting services to implement RD/RA activities including oversight of RAs and the remedial contractors. Activities were conducted in accordance with the ROD, amended ROD, ESD, and DEQ task orders. E & E was responsible for preparation of work plans, implementation of field investigation activities, preparation of data summary documents, preparation of the engineering designs and specifications related to remediation activities, and the procurement and contracting of the remedial contractor.

For the RA construction phase of the project, E & E provided construction oversight and construction management services. During construction, oversight engineers monitored contractor performance and compliance with the contract requirements, conduct inspections, and document work progress and modifications.

After a competitive public procurement process, the construction contract was awarded by E & E to Wilder Construction (Wilder). Wilder (subcontractor to E & E) and their subcontractors were responsible for the physical implementation of the fieldwork specified in the *Contract Documents– Support Facility Modifications* (E & E 2005). As the prime construction contractor, Wilder provided physical labor and operations management for the project. Wilder also provided project management of the subcontractors and the material and equipment vendors that were required to complete construction. Subcontractor and vendor lists are provided below.

Subcontractors and Vendors:

- Ampere Electric of Portland, Oregon - provided electrical system materials.
- Anctil Plumbing of Beaverton - provided plumbing services.

- Bedford Construction of Portland, Oregon - provided structural concrete construction services.
- Brothers Concrete Cutting of Portland, Oregon - cut the asphalt in preparation for the construction of subsurface concrete structures.
- Butler Buildings of Kansas City, MO provided the pre-fabricated shop building.
- Carlson Testing of Tigard, Oregon - provided materials testing services including concrete quality assurance services.
- Curtis Specialty Welding Services of Portland, Oregon - provided metal fabrication services.
- David Evans & Associates, Inc. (DEA) of Portland, Oregon - provided surveying services.
- East Jordan Iron Works of Portland, Oregon - supplied the sump grates for the shop building, hazardous materials storage area, and the wheel wash.
- H.D. Fowler of Clackamas, Oregon - supplied the concrete vaults for the backflow prevention device and the water supply valves.
- Locates Down Under of Portland, Oregon - performed utility locating services.
- Midnight Electrical of Portland, Oregon - provided electrician support for Ampere Electricity.
- Morse Bros., Inc. of Portland, Oregon, supplied base course and select fill materials.
- Overhead Doors of Portland, Oregon - installed the vehicle access doors for the shop building.
- Ross Island Sand and Gravel of Portland, Oregon - supplied concrete.
- SMA Building Erectors of Portland, Oregon - assembled the pre-fabricated Butler Building.
- Utility Vault of Wilsonville, Oregon - supplied the precast concrete fire hydrant valve and service valve vault and the vault for the backflow valve.

2.2 Pre-Construction Activities

This section summarizes the pre-construction activities including meetings, submittal delivery and review procedures, and permitting.

2.2.1 Pre-Construction and Preparatory Meetings

Prior to construction activities, a required pre-construction meeting was held. Attendees included E & E's project manager, project engineer, and oversight supervisor; and Wilder's key project personnel including the project manager and site superintendent. The topics presented and discussed during the meeting included staff introductions, a scope of work summary, relevant documents, submittal requirements, health and safety, site access and transportation, site

constraints, construction schedule and sequencing, and construction procedures and testing.

2.2.2 Submittals

Per Section 01300 of the *Contract Documents,* Wilder and their subcontractors and/or vendors were required to prepare and deliver submittals to E & E including plans [e.g., construction operations plan (COP) and health and safety plan, etc.], shop drawings, and product data on materials and equipment. The submittal delivery and review procedure was established at the beginning of the project and refined throughout. The steps in the submittal procedure were as follows:

1. Wilder delivered submittals to E & E with an associated electronic copy of a transmittal and tracking form. Information contained on the form included a description of the material or product; a reference to the applicable specification section or sections; an area for the reviewing engineer to present the results of the review; and the submittal number with serial tracking number (re-submittal number). A majority of the submittals were delivered as hardcopies per the *Contract Document*s. However, certain pre-approved exceptions were allowed in which the delivery of the submittal was made electronically via email. The specified numbers of hardcopies of the submittal (six) were delivered to E & E's field office trailer for distribution.

2. Upon reception of each submittal, E & E recorded the delivery in a log and then prepared it for distribution. Submittals that were not time critical were distributed weekly during the Weekly Progress Meetings. Submittals that required expedited review were mailed as overnight delivery to the reviewing engineer(s). Submittals that were delivered electronically via email were tracked following a similar log-in and distribution procedure to ensure accurate tracking.

3. The results of the review process were recorded on the associated electronic cover sheet, which was then returned via email to Wilder with comments attached, as applicable. If the submittal was rejected or additional information was requested by the engineer, then the process was repeated until all required information was received and approved. Tracking forms and logs were updated with a re-submittal number, which was the addition of a number suffix to the original submittal number (e.g. 13.1, 13.2, etc.).

4. Per requirements, Wilder maintained and presented at each weekly progress meeting an updated Submittal Log which included the date of the submittal, the date of E & E's response, and the status (e.g., accepted, rejected, accepted with comments, etc.).

The submittals were generally prepared in accordance with the time requirements specified in the *Contract Documents* and were submitted to E & E for review prior to plan implementation and/or material/equipment purchase and/or delivery. Appendix A contains copies of select material submittals (e.g., Butler Building Drawings). A complete set of the submittals are on file at the E & E offices in Portland and Seattle.

2.3 Construction Activities

The support facility modifications consisted of the following major construction components:

- General Mobilization and Site Preparation;
- Earthwork;
- Concrete Structures;
- Shop Building;
- Site Electrical;
- Water Distribution; and
- Demobilization.

Details related to each of these components are provided below.

2.3.1 General Mobilization and Site Preparation

Wilder temporarily relocated the two existing site trailers from the work area to an approve location just to the south of the paved area. In addition, the vehicle wash rack and boot wash were temporarily established outside of the work area. Power and telephone service were established, and a portable generator was supplied for interim power during major electrical system modifications.

Per the general mobilization requirements of the contract, Wilder moved or relocated all equipment, fencing, and other appurtenances as necessary to facilitate work; established and constructed stockpile, staging, loading, unloading, and other work areas; and provided portable field lavatories with hand-wash stations.

Survey Control

Wilder subcontracted David Evans and Associates (DEA) to perform layout surveying services. The planned construction features were laid out from established control points, benchmarks, and baselines indicated on the design drawings. Foundations were made square by the concrete subcontractor using tape measurers and equal diagonal measurements.

2.3.2 Earthwork

2.3.2.1 Materials and Equipment

Select Backfill

The soil remedy for the upland portion of the site (as prescribed in the ROD) required a minimum of two feet of clean soil over the entire site. This soil minimizes the possibility of direct and indirect exposure of terrestrial biota and humans to chemical contaminants remaining in situ. The select backfill material is the bulk volume of clean fill material utilized to meet this requirement in the support area. The material was supplied by Morse Bros, Inc. (MBI) of Portland, Oregon, from their Angell Quarry. Prior to delivery, Wilder submitted samples for testing to Carlson Testing. Analyses performed included fracture particles (TP-61), sieve analysis (AASHTO T 27), and sand equivalent (AASHTO T 176). Wilder utilized typical earthwork equipment to distribute, grade, compact, and test the compacted density of the select backfill. The equipment utilized included excavators, graders, bulldozers, vibratory rollers, grade level lasers, and nuclear density gauges.

Base Aggregate

Base aggregate materials were also supplied by MBI from their Angell Quarry. The base aggregate materials (i.e., crushed rock) were specified for: water supply piping bedding and backfill material, and base and top course material for the asphalt pavement. The designated size of the materials were: 37.5mm - 0mm (1-1/2 inch - 0 inches) for the base course; and 19.0 mm – 0 mm (3/4 inch – 0 inches) for the top course and trench backfill.

Demarcation Fabric

Demarcation fabric (i.e., orange construction fencing) delineates the extent of the clean soil cap and serves as a warning marker for future land users that the soils beneath the layer may be contaminated. The fencing is made of high-density polyethylene, is orange in color, and has an ultra violet stabilizer. Panels of the demarcation fabric were fastened together using zip ties.

2.3.2.2 Execution

Trenching

Excavation of trenches; placement of bedding materials; and subsequent backfill and compaction were required to reroute the water supply and to allow reconfiguration of other site utilities.

The excavation of the trench for the water main was initiated on March 29th, 2005, at the point where the back-flow control valve was removed for relocation. This location is approximately 470-feet to the south of the current location of the new fire hydrant. Excavation proceeded north towards the support area. Although it is not necessary to keep pressurized water lines perfectly level and a slight angle decreases the likelihood of air entrapment, a grade level laser was utilized to maintain a level trench excavation and to establish bedding backfill

grades. For a detailed description of the trench backfill, compaction, and completion, refer to Section 2.3.7.2 (water main), below.

In a cost-saving change, subsurface electric and telephone conduit were run on top of existing paving (vs. buried). Therefore, except for a small length of trench for telephone conduit between existing power/telephone pole and the newly placed power pole with meter, there were no trenches dug for electric/telephone utilities.

Select fill

Delivery and placement of the select backfill material began on April 11th and was stopped on April 20th. Prior to placement, DEA performed the necessary layout and grade staking. Per Addendum Number 1 to the *Contract Documents*, Wilder was required to place demarcation fabric between the existing soil and the select backfill. The select backfill was placed and graded in lifts using a bulldozer and small surface grader. A vibratory roller was utilized throughout placement, and care was taken to ensure that several passes were performed in each area of placement. On April 20th, Wilder's subcontractor for nuclear density testing, Carlson Testing, Inc., performed several tests and was only able to obtain three passing results. The moisture content of the soil was too high, and compaction requirements were not achieved. Multiple attempts were made to dry the material by tilling, turning it over, and allowing it to remain exposed during warm and dry weather, but the moisture retention characteristics did not facilitate drying. During each site visit, the testing inspector produced a report. At the bottom of the report generated during the site visit on April 20th , the inspector noted that pumping of the material was observed. A copy of this report is included in Appendix B. As a result of this situation, E & E issued a field directive (EE-WC-07) on June 10th forgoing paving requirements and transferring the grading requirements to the upland cap contract. Under the support facility modifications contract, Wilder was to place 3/4-inch minus base aggregate material at the entrance to the shop building and as a ramp into the hazardous material storage area. The impacts to the costs of the project from this field directive were addressed in Change Order 1 (see Section 2.4, below). At this point, DEQ was considering leaving the support area without asphalt paving. However, DEQ reconsidered the issue at a later date and decided to implement the asphalt paving (under the upland cap contract).

2.3.2.3 Quality Control/Quality Assurance

Material Testing

Quality control and assurance (QC and QA) for the earthen materials was accomplished by implementation of off-site and on-site material testing and evaluation of the results for compliance with the *Contract Documents*. For off-site material testing, Wilder was required to coordinate the sampling and submit to E & E the results of material testing from an independent laboratory. For on-site testing, Wilder was responsible for retaining qualified personnel to implement

and document on-site testing. For specific testing requirements and frequencies, refer to Section 02200 of the specifications within the *Contract Documents*. It was E & E's QA responsibility to evaluate the results for compliance with the specifications.

Trenching
The QC measures performed by Wilder during trenching procedure were visual monitoring by the Site Superintendent and grade level checking during excavation and bedding material placement. QA measures taken by E & E included regular visual inspection and verification that the specified trenching procedures were being followed.

Select Backfill
During the placement of the Select Backfill, Wilder regularly checked placed materials to survey staked elevations and grades using a laser grade level. E & E oversight personnel performed visual inspections and checked the information written on the survey stakes for compliance with design drawings.

2.3.3 Concrete

2.3.3.1 Materials and Equipment

Concrete was supplied by Ross Island Sand & Gravel Co. and MBI and was placed by Bedford Construction. Concrete installed during this RA has a minimum compressive strength of 4,000 pounds per square inch and has a mix design that conforms to ODOT 00540.13 specifications. Reinforcement steel is grade 60 meeting ASTM A615 requirements. Standard carpentry and concrete tools were utilized to: construct and place the concrete forms and batter boards; cut and bend the rebar; place and secure the rebar and reinforcements; and perform finish work.

Precast Valve boxes and Vaults
The precast fire hydrant valve box and backflow valve vault were supplied by Utility Vault of Wilsonville, Oregon. The fire hydrant and service valve box is a model number 444-LA, which has overall dimensions of 4-feet in length, by 4-feet in width, and 4-feet in depth, including the top (a galvanized metal diamond plate door with locking latch). The vault for the backflow valve is a model number 5106-3-LA, with overall dimensions of 11-feet 2-inches by 5-feet 8-inches by 6-feet 2-inches high, including the lid. The lid has spring assisted locking aluminum doors.

2.3.3.2 Execution

Bedford Construction was Wilder's subcontractor for the construction of all structural concrete features, which included the construction of the foundation footings, piers, and slab floor for the shop building, the hazardous materials storage area, the wheel wash, and the base for the luminaries (next to the shop building). Industry typical means and methods were employed to construct the

forms and batter boards, place and secure rebar, and perform finish work. The forms and batter boards were constructed using plywood, metal form stakes, and dimensional construction lumber. Elevation and grade control was accomplished with a combination of grade level lasers, carpenter's levels, string lines, and straight edges.

2.3.3.2.1 Concrete features of the Shop Building

The construction of the shop building's six structural footings and piers occurred from April 7th to the 14th, 2005. In preparation for concrete installation, Wilder retained Brothers Concrete Cutting to cut the asphalt at the six locations surveyed by DEA. Wilder then excavated to the depth required utilizing surveyed elevations and a grade level laser. After excavation, Wilder used a plate compactor on the moisture conditioned soil to ensure that the bearing surfaces were competent. The foundation footings and piers were then constructed by Bedford Construction. The footings and piers were poured on the same day, April 13th, but were not monolithic. The forms were stripped, and finish work was completed on the following day. Once completed, Wilder backfilled the over-excavation in preparation for the shop floor slab construction. The backfilled material was placed in lifts and compacted using the plate compactor.

The shop floor is a six inch thick steel reinforced monolithic slab constructed from April 27th to May 3rd. The slab floor is graded towards a sump in the center of the building.

2.3.3.2.2 Hazardous Materials Storage Area

The Hazardous Materials Storage Area is 30-feet long, 18-feet wide, and has a minimum depth of 3-feet. It was designed and installed to be double containment storage for hazardous materials. The interior is graded to direct spilled liquid or rain water to a sump along the south wall. The design incorporates a 7-foot 9-inch wide ramp with a 5% grade along the west wall. This ramp allows the placement and removal of 55-gallon drums with a forklift or drum dolly from an entrance on the south side.

2.3.3.2.3 Tire Wash

A new tire wash was constructed in the southwest corner of the support area. It was constructed from May 11th to the 13th. Bedford Construction used similar construction methods as those used to construct the hazardous materials and the shop floor with one notable exception: the rebar schedule was significantly different from the others. The rebar diameter was too large to allow cutting and bending on-site, and therefore, the rebar was pre-fabricated and delivered at lengths specified.

2.3.3.2.4 Luminaire Base

A cylindrical steel reinforced concrete base was required for the luminaire. The concrete structure provides a mounting surface and ballast. The construction of

the base reasonably conformed to the accepted submittals, the design drawings, and the specifications, except for one slight field modification: the bolts, as represented in the associated submittal and delivered to the site, were 10-inches too long for the designed base. The base was designed to have the appropriate ballast by being larger in diameter and not as deep, which was an attempt to minimize excavation into possibly contaminated site soils. The manufacturer specifications require that the bolts be completely embedded in the concrete. E & E and Wilder determined that the most cost effective and structurally sound method to remedy the situation was to make the lower portion of the base slightly deeper and to raise the mounting plate enough to compensate for the remaining length. The resulting modification was addressed in Change Order 1 (see Section 2.4, below).

2.3.3.2.5 Miscellaneous

Other miscellaneous features of the construction required concrete. They included the thrust blocks; the small support pads for the fire hydrant and 6-inch auxiliary control valve and the backflow assembly; and the installation of the bollards in front of the shop and hazardous materials storage area. The concrete for the thrust blocks and small pads was delivered to the site with concrete required for structural pours. The concrete for the bollards, however, was not, and Wilder was allowed to mix the concrete for the bollards on-site.

2.3.3.2.6 Precast

The precast valve box for the fire hydrant and service valve and vault for the backflow valve were delivered and installed per the specifications and drawings of the *Contract Document*s.

2.3.3.3 Quality Control

With each truck load of concrete delivered to the site, Ross Island Sand and Gravel or MBI supplied a manifest giving the design mix specifications for the batch. Copies of these manifests are included in Appendix B. Wilder retained Carlson Testing Inc. to: inspect concrete forms, batter boards, and rebar configuration for compliance with the design specification and plans; generate a daily field report documenting the observations, samples taken, results of on-site testing, and inspections made during each site visit; sample and analyze aggregates and test the plasticity of the concrete per ODOT 00540.17(a) and (b), respectively; and to take cylinders in accordance with ODOT 00540.16(c). It was the responsibility of E & E's oversight personnel to review the results from the on-site testing and results from the off-site testing laboratory for compliance with the project specifications. Results were found to be in reasonable compliance with the design specifications. The daily reports and results of laboratory analysis are also included in Appendix B.

2.3.4 Shop Building

2.3.4.1 Materials and Equipment

The 40-feet long by 25-feet wide American Institute of Steel Construction (AISC)-certified pre-fabricated metal shop building was supplied by Butler Manufacturing of Kansas City, MO. Prior to delivery, Wilder was required to submit manufacturer shop drawings and building calculations. Copies of the drawings are included in Appendix A. The building is a clear span, self-framing type with a gabled roof and an eave height of 10-feet. It has two side walls and two end walls. One of the 25-foot end walls has two lockable roll-down shop doors. There are two 30-inch wide access doors on each of the 40-foot side walls. The roof and walls are equipped with thermal insulation. The structural mill sections are generally designed in accordance with AISC's specifications for the design, fabrication, and erection of structural steel buildings. The cold-formed steel structural members are generally designed in accordance with AISC's specifications for the design of cold-formed steel structural members.

2.3.4.2 Execution

The shop building was erected by SMA Building Erectors. Erection of the building occurred from June 21st to July 22nd. The delivery of the building was very late and outside the required contract schedule. The manufacturer was retooling, and this caused an approximate 1 month delay in the delivery. For reasons that are unknown, the erection took significantly longer than predicted. As this did not cause any QA/QC problems or added cost to DEQ, the long delivery and erection period did not trigger any liquidated damages clauses.

2.3.4.3 Quality Control

QC and submittal information pertaining to the shop building by the contractor was reviewed for adequacy and compliance with the plans and specifications by E & E. It was during this review that an apparent problem with the column bases was identified by the engineer. Shop design and drawings were modified by the manufacturer and resubmitted. The revisions were found to be acceptable by the engineer.

2.3.5 Site Electrical

2.3.5.1 Materials and Equipment

Materials

A comprehensive list of the required materials is too extensive for this report. For a specific materials list, refer to Section 16000 of the contract specifications.

The following is a list of major electrical components for the site installed by Ampere Electric:

- A service drop and meter box for the 200 amp main with a NEMA 4R 100 amp 2P circuit breaker,
- 3" polyvinylchloride (PVC) buried conduit from the meter box to the main breaker and from main breaker to the site breaker panel located at the

Power Center. Conduit risers to meters and breaker boxes are galvanized steel,

- 2" PVC buried conduit from the site breaker panel to the shop building's breaker panel, Conduit risers to meters and breaker boxes are galvanized steel,
- 2" PVC buried conduit from the site breaker panel at the Power Center to the trailers, Conduit risers to meters and breaker boxes are galvanized steel,
- An 18 circuit panel for the site breaker panel at the Power Center,
- Photocell switched pole mounted dual fixture luminaire located next to the north corner of the shop building, and
- Associated cable, wire, mounting structures, and breakers.

There are two #2 AWG grounding rods installed near and connected to the meter main and two #2 AWG grounding rods installed near and connected to the Power Center with a jumper wire between panels.

Equipment
Standard equipment used by electricians was used on this project. The luminaire was erected using a mobile man-list.

2.3.5.2 Execution

Electrical system installation was performed by Ampere electric with assistance from Midnight Electric throughout the entire duration of the project. Installation was performed in compliance with the applicable Uniform Building Codes and complied with the applicable requirements of NFPA 70 "National Electrical Code" (the NEC), National Electrical Manufacturers Association (NEMA), or other recognized standards.

2.3.5.3 Quality Control/Quality Assurance

After completion of the installation and splicing and before energizing the conductors, the wires were given continuity and insulation tests. Wire and cable in each voltage classification was isolated completely from all extraneous electrical connections at cable terminations and joints. Insulation tests were conducted and readings were taken per contract specifications. No measurement was observed less than 25 megohms.

2.3.6 Shop Electrical

2.3.6.1 Materials and Equipment

A comprehensive list of the required materials was too extensive for this report. For a specific materials list refer to Section 16000 of the specifications.

The following is a list of major electrical components for the shop building installed by Ampere Electric:

- An 18 circuit panel within the shop building on the west wall;

- Two 240V heater units with integral fans, adjustable louvers, integral thermostats;
- Thermostatically controlled mechanically opened and closed intake and exhaust louvers with an attached fan on the exhaust louver; and
- Four banks of fluorescent shop lights control by switch panels next to each access door.

2.3.6.2 Execution

As stated above, electrical system installation was performed by Ampere Electric with assistance from Midnight Electric throughout the entire duration of the project. Installation was performed in compliance with the applicable Uniform Building Codes (UBCs) and complied with the applicable requirements of NFPA 70 "National Electrical Code" (the NEC), NEMA, or other recognized standards.

2.3.6.3 Quality Control

After completion of the installation and splicing, and before energizing the conductors, the wires were given continuity and insulation tests. Wire and cable in each voltage classification were isolated completely from all extraneous electrical connections at cable terminations and joints. Insulation tests were conducted and readings were taken per the specification of the *Contract Documents*. No measurement was observed less than 25 megohms.

2.3.7 Water Distribution

Historic site activities required a water supply network with two supply lines from the service main on Willamette Boulevard and multiple branches for distribution throughout the site to supply industrial processes, office needs, fire suppression needs, and the large quantities of water necessary during the implementation of RAs. Until implementation of this RA, water supply to the support area was through the existing pipe network, which was prone to leakage and was known to be of substandard construction. The site's backflow control valve and site shutoff valve were contained within a dilapidated wood framed metal-sided box that had no apparent connection with the current site configuration. As current and planned site uses do not require an extensive distribution network, an upgraded simplified system was installed with a new water main and service connections. The new water main was connected to the site supply line a few feet in from where it enters the site about mid-way on the northeast side of the property.

2.3.7.1 Materials and Equipment

Water Main

HD Fowler supplied the 6-inch diameter ductile iron pipe (DIP) and the 6 and 8-inch diameter fittings, the 5-1/4-inch fire hydrant, and the 6-inch auxiliary gate valve. The DIP is American Water Works Association (AWWA) A21.15-88 with a CL-53 minimum wall thickness per AWWA C151-75 and is thin cement lined. The fittings are mechanical joint AWWA C153 and flanged type per AWWA C110. The mechanical joint restraints are Megalug® Series 1100. The fire

hydrant is an AWWA C502 compression type manufactured by M&H Valve Co. The auxiliary gate valve conforms to AWWA C509 standards and was also manufactured by M&H Valve Co. The backflow preventer and associated valves, all of which are both relatively new and meet City of Portland requirements, were salvaged and reinstalled.

Service
The service tap is Smith-Blair 311 service saddle for DIP with a ¾-inch Mueller 300 ball valve. The service piping is copper tube type-K supplied by Anctil plumbing.

2.3.7.2 Execution

Water Main
Water distribution modification procedures were started on March 29th with trench excavation from an area near the new tie-in location to the support area. On April 4th, upon excavation of the main supply pipe at the tie-in location, it was discovered that the diameter of the pipe is 8-inch and not 6-inch, as shown on the drawings. It was apparent that a reducing coupler was required and that the location of the backflow valve would not be close-coupled with the main as shown on the drawings. In order for Wilder to make the connection and reuse the backflow valve, it was necessary for it to be moved approximately 12-feet south of the original design location.

Upon completion of the trench excavation, a minimum of 4-inches of ¾-inch minus rock was placed in the trench for pipe bedding. DIP installation began on April 5th. DIP Joints and fittings were installed in accordance with the manufacturer's recommendations and in conformance with the *Contract Documents*, which were developed from AWWA C600 specifications. The bell socket of the pipe or fitting was thoroughly cleaned along with the plain end of the mating pipe. A small loop was placed in the gasket and inserted in the socket. A National Science Foundation (NSF) 61 certified lubricant was applied to the gasket and plain end of the pipe. As the plain end was being lubricated, it was inspected to ensure the end was beveled and did not have square or sharp edges that may damage or dislodge the gasket and cause leaks. The plain end was pushed into the bell of the pipe and 'driven home' using the bucket of the excavator. The pipe was inserted until the bell end of the pipe aligned with the indicator stripe on the uncut plain end and/or an audible metal-to-metal contact tone was heard. Prior to insertion of each pipe section, a cap full of Poollife [granular chlorinator, active ingredient-calcium hypoclorite (68%)] was cast into the installed pipe.

Similar care was taken in following the specifications in the *Contract Documents* during the installation of mechanical joint assemblies and flange connections. The valves and fittings were installed in accordance with manufacturer's

recommendations and within reasonable conformity to the locations and configurations shown on the design drawings.

Thrust blocks were installed on the gate valve and all horizontal or vertical bends to transfer pressure, momentum forces and dynamic hydraulic loads 'water hammer' to bearing surfaces of undisturbed soil. The thrust blocks were installed within reasonable conformity to the specifications and drawings of the *Contract Documents*. Generally, the installation procedures were as follows: Plastic was wrapped around the pipe and/or fittings to protect it from surface corrosion during concrete curing; bent rebar straps were fitted as required on vertical bends and each side of the gate valve body; a determination of the required surface area was made and plywood forms were fabricated to obtain the required surface area; and the concrete was poured into the form.

After satisfactory inspections and pressure test results were obtained, Wilder backfilled the trench and associated excavations. Generally, backfilling procedures were as follows: ¾-minus aggregate rock was placed on each sides of the DIP. Hand shovels were used to work the fill under the 'cheeks' of the pipe. Once sufficient fill material was placed, the material was tamped using the bucket of the excavator or backhoe. More material was then placed until a 6-inch minimum lift thickness was obtained over the pipe. Several passes were then made with a plate compactor. Tracer tape was placed over the pipe on top of the ¾-inch minus and the trench was backfilled completely to existing ground surface with previously excavated native soil.

Installation of the main supply line was completed on April 15th.

2.3.7.3 Quality Control

Prior to backfill placement, installed pipes and fittings were inspected and pressure tested in accordance with the *Contract Documents*. Prior to putting the main into service, it was flushed, cleaned, disinfected, and tested by the residual chlorine method per the *ODOT Standard Specifications* (ODOT 2002). Wilder was responsible for correct execution of all testing procedures, and E & E was responsible for performing inspections and reviewing the testing procedures and results for compliance.

2.4 Change Orders and Project Deviations

Project activities were modified in response to unexpected conditions, requests for additional work, and adjustments to the site work directed by DEQ and E & E. One change was issued during the project. The following list contains brief description of the contents of that change order:

- Change Order 1:
  - Deleted the requirements for asphalt paving and fence installation. These were added to the Upland Cap contract. This was done for administrative reasons.

- Added a new sanitary waste holding tank (the existing one was not suitable for burial beneath asphalt).
- As a cost saving measure, the Contractor proposed rerouting electric lines and using EMT and PVC conduit instead of rigid galvanized steel conduit. Additionally, the Contractor proposed using primer-coated steel garage doors instead of the corrosion-resisting steel doors that were specified. These proposals were accepted.
- It was determined that air terminals (lightning rods) were not needed on the new shop building because of the proximity of the new luminaire, which functions as a lightning rod. The air terminals were deleted from the scope of work.
- The thickness of the concrete luminaire pad was increased to accept the length of anchor bolt required for the luminaire. The quantity of concrete (unit price item) was increased.

A copy of the change order is included in Appendix C. Cost effects are presented in Section 3 of the Upland Cap CSR.

In addition to change orders, other minor changes in sequencing, site layout, or construction procedures that weren't in conflict with the intent of the project plans and specifications were performed. These changes were authorized through work directives issued by E & E oversight personnel. These directives along with clarifications and other significant communications were issued and documented by E & E through formal correspondence letters (numbered "EE-WC-#"). Copies of these letters are included in Appendix C. Please note that EE-WC-05 was not issued.

2.5 Health and Safety

E & E site personnel in conjunction with the construction contractor's personnel were responsible for providing guidance and inspections to ensure proper health and safety procedures were followed at the site during construction activities. All contractors and consultants performing work on the site developed and implemented their own site safety plans in accordance with the provisions of the Occupational Safety and Health Administration (OSHA) Standards (29 CFR 1910) and General Construction Standards (29 CFR 1926), including OSHA Hazardous Waste Operations and Emergency Response, Interim Final Rule (29 CFR 1910.120). Compliance with all other applicable federal, state, and local laws and regulations was also required.

A formal safety meeting was held at the beginning of the project to review safety procedures with all site personnel and inform workers of potential hazards. Daily safety meetings to discuss physical and chemical hazards associated with the day's activities were conducted each morning before work began. Site safety briefings were also conducted for all new personnel reporting to the site and for all visitors to the site.

Protective clothing, such as a hard hat, steel-toed boots, safety vests, and safety glasses, was required for entry into the site's work zones. The primary physical hazards at the site included heavy equipment operation; trench excavation; noise; slips; trips; and falls. The major health and safety concern related to contamination on-site was dermal contact and/or ingestion of the contaminated matter and inhalation of vapors and/or contaminated particulates (i.e., dust). During dry conditions, Wilder controlled dust by water application with a water truck to help prevent on-site personnel and the public from being exposed to airborne contamination.

2.6 Community Relations

For discussions related to community relations, refer to the Upland Cap CSR.

2.7 Documentation

2.7.1 Oversight Documentation

E & E oversight engineers completed construction reports on a daily basis. Copies of the *Daily Field Reports* are included as Appendix D. Items recorded on each report included weather conditions; on-site personnel; site visitors; major equipment used; materials delivered to the site; non-conformances noted; and safety concerns noted. Note, due to project delays from weather, material delivery problems and compaction problems associated with the select fill, 19 daily reports document that no work was performed by the Wilder or their subcontractors on the Support Facility Modifications contract that day. In an effort to save resources and minimize the size of this document, these "no work" reports are not included in the Appendix.

E & E engineers also maintained field activity logbooks which included detailed documentation of materials or equipment delivered; records of inspections performed; work progress; planned activities; a photo-documentation log; reports of minor field changes; and field problems. A digital camera was used for photo-documentation. Select photos are included in Appendix E.

2.7.2 Employee and Visitor Log

An Employee and Visitor Log was maintained by E & E for the duration of the project. All personnel working at or visiting the site were required to sign the log and provide information including date, name, address, affiliation, purpose for visit, time in, and time out.

2.7.3 Weekly Progress Meetings

Each week, E & E and Wilder held a weekly progress meeting to discuss project issues including, but not limited to, schedule, installation progress, submittals, problems encountered, and health and safety. Attendees included E & E's project manager, project engineer, and oversight engineer; and Wilder's project manager and Superintendent. Following each meeting, meeting minutes were developed.

After each meeting, E & E also prepared a Summary of Action Items, which identified tasks to be completed by each party, as discussed in the progress meeting.

2.7.4 Record Drawings

At the completion of the RA, a DEA survey crew performed surveying to document the as-built locations and elevations of the newly constructed and modified site features. From the survey data, DEA developed record drawings showing the as-built plan and profile locations of the site features. The record drawings are included in an appendix to the *Construction Summary for the Upland Cap* (E & E 2006).

2.8 Demobilization

Following construction completion, Wilder performed the following restoration and demobilization activities:

- Decontaminated and demobilized construction equipment;
- Demobilized field office and other temporary facilities; and
- Cleared site of waste materials, rubbish, and debris (disposed offsite).

2.9 Chronology of Major Events

Following is a list of major events that occurred during the RA:

- **3/23/05 -** Contract signed with Wilder.

- **3/29/05 -** construction activities commence with the trenching for the modifications to the main waterline supply to the support area and removal of the backflow prevention device.

- **4/5/05 -** The office and decontamination trailers are moved to their temporary location.

- **4/07/05 -** The backflow prevention device installation is complete, the auxiliary control valve is installed, and the construction of the foundation footings and post piers for the shop building commences.

- **4/08/05 -** The thrust blocks for the fire hydrant and auxiliary valve are installed and the support pad is poured for the backflow prevention device.

- **4/11/05 -** Select fill placement begins.

- **4/14/05 -** The footings and post piers for the shop building are completed.

- **4/15/05 -** Installation of the reconfigured main water supply line is completed.
- **4/27/05 -** Installation of the shop building floor slab begins.
- **5/02/05 -** Construction of the concrete mounting base and ballast for luminaries' pole and the excavation for the new wheel wash and hazardous materials storage area begins.
- **5/03/05 -** The installation of the shop building floor slab is completed and excavation for the hazardous materials storage area begins.
- **5/4/05 -** Construction of the hazardous material storage area form and batter boards begins
- **5/9/05 -** Construction completion of the hazardous materials storage area.
- **5/11/05 -** Construction of the wheel wash begins.
- **5/13/05 -** Completion of the wheel wash.
- **6/21/05 -** The erection of the shop building starts.
- **6/28/05 -** Installation of the protective bollards begins.
- **7/14/05 -** Installation of the bollards is complete.
- **7/22/05 -** The building erection is finished.
- **7/27/05 -** The construction is substantially complete.

3 Project Quantities and Costs

A detailed summary of the RA construction quantities and costs is presented in the *Construction Summary for the Upland Cap* (E & E 2006).

4 References

Ecology and Environment, Inc. (E & E), May 2006, *Construction Summary Report for the Upland Cap,* submitted to DEQ, prepared by E & E-Portland, OR.

_____, February 2005, *Contract Documents for the Support Facility Modifications,* submitted to DEQ, prepared by E & E-Portland, OR.

National Oceanic and Atmospheric Administration, National Marine Fisheries Service (NOAA Fisheries), 2002, *Biological Opinion for Construction of the Barrier Wall at the McCormick & Baxter Creosoting Company Superfund Site, Willamette River, Portland, Oregon,* submitted to EPA, Oregon Operations Office.

Oregon Department of Environmental Quality (DEQ), October 2001, *Five-Year Review Report for McCormick & Baxter Creosoting Company Superfund Site, Portland, ORD009020603, Oregon.*

Oregon Department of Transportation (ODOT), 2002, *Standard Specifications.*

United States Environmental Protection Agency (EPA), June 2002, *The Biological Assessment (BA) for McCormick & Baxter Creosoting Company, Portland, Oregon,* submitted to the National Marine Fisheries Service (NOAA Fisheries).

_____, 1995, *Remedial Design/Remedial Action Handbook* (EPA 540/R-95-059).

United States Environmental Protection Agency and the State of Oregon Department of Environmental Quality (EPA/DEQ), December 2003, *Archaeological Monitoring Protocol,* prepared for the McCormick & Baxter Creosoting Site, Portland, Oregon.

_____, August 2002, *Explanation of Significant Difference (OU3 – Final Groundwater),* prepared for the McCormick & Baxter Creosoting Site, Portland, Oregon.

_____, March 1998, *Amended Record of Decision,* prepared for the McCormick & Baxter Creosoting Site, Portland, Oregon.

_____, 1996, *Record of Decision*, prepared for McCormick & Baxter Creosoting Company, Portland, Oregon.

A Select Submittals

3B

A BlueScope Steel Company

BUTLER MANUFACTURING COMPANY
7440 Doe Avenue
Visalia, California 93291
Phone: (559) 651-5312
Fax: (559) 651-5395
www.butlermfg.com

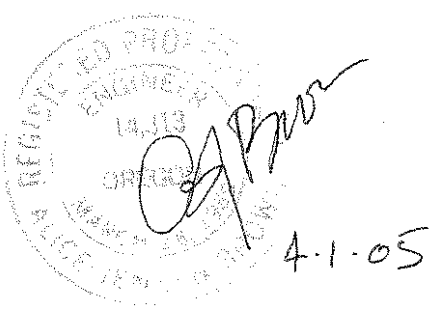
CUSTOMER: McCormick & Baxter
LOCATION: Portland, Oregon
BUILDER: SM Andersen Company, Inc.
BUILDING SIZE UNIT 1: 25' 0" x 40' 0" x 10'

BMC ORDER NO.: 127470

BUILDER ORDER NO: 1801_PO10688

DESIGNER: Bita Eftekhar
DATE: 04/01/05

TABLE OF CONTENTS



D E S I G N C R I T E R I A R E P O R T

ORDER # 127470 BUILDER - S M ANDERSEN CO., INC. BLDR ORDER # 1801_PO10 BLDR ACCOUNT # 20-36-051-07
BLDR CONTACT - RICK BROCKWAY BLDR PHONE # 503-860-7963 PROJ NAME - MCCORMICK_AND_BAXTER ENGR GRP - Visalia

COMPLEX - NO	(TYPE)	(WIDTH)	(LENGTH)	(HEIGHT)	(SNOW)	(WIND)	(CODE/YEAR)	(SLOPE)
UNIT # 1 BLDG DESCRIPTION	LRF	25' 0" 0/32 X	40' 0" 0/32 X	10' 2" 20/32	25 PSF	100 MPH	IBC 03	2.000:12

(COLUMN SHAPE)		(COLUMN KNEE)		(COLUMN OFFSET)		(GIRT DEPTH)	
LSW: TAPERED	RSW: TAPERED	LSW: HORIZONTAL	RSW: HORIZONTAL	LSW: 1 1/4"	RSW: 1 1/4"	LSW: 9 1/2"	RSW: 9 1/2"

1. DESIGN SPECIFICATIONS

1.1 All structural mill sections or welded-up plate sections are designed in accordance with the 1989 edition of the AISC SPECIFICATION FOR THE DESIGN, FABRICATION AND ERECTION OF STRUCTURAL STEEL FOR BUILDINGS.

1.2 All cold-formed structural members are designed in accordance with the 2001 edition of the AISI SPECIFICATION FOR THE DESIGN OF COLD-FORMED STEEL STRUCTURAL MEMBERS.

1.3 All welding shall be done in accordance with the AMERICAN WELDING SOCIETY CODE FOR BUILDING CONSTRUCTION.

2. MATERIAL SPECIFICATIONS (Minimum Fy and Fu in ksi)

Built-up Sections matl <=1" thick and <=12" wide	.. Fy =	55.
Built-up Sections matl >1" thick or >12" wide	.. Fy =	50.
Wide flange Sections (unless noted)	..... Fy =	36.
Cold-formed Members up to .120 thickness	..... Fy =	60.
over .120 thickness	..... Fy =	55.
Galvanized Material	..... Fy =	42.
Brace Rods up to 3/4" diameter	..... Fu =	80.
over 3/4" diameter	..... Fu =	70.
Roof Cover VSR 00 Gage		
Wall Cover STYLFU 24 Gage	..... Fy =	50.

3. SPECIFIED DESIGN LOADS AND BUILDING CODE

3.1 BUILDING CODE:
The 2003 edition of the "International Building Code" by the International Code Council. Inc.

3.2 DESIGN LOADS

Terrain Cat/Wind Exp	C
Dead Load	2.7 + Frame Weight
Ground Snow Load	25 psf
Rain Snow Load	0.00 psf
Roof Snow Load	20.00 psf
Exposure of Roof	Partial Exposed Rf
Thermal Condition	Normal
Collateral Load	5.00 psf
Wind Speed	100 mph
Seismic: Ss - 100%	S1 - 032%
Snow Importance Factor	1.000
Wind Importance Factor	1.000
Seismic Importance Factor	1.000
Min County Ground Snow	10 psf
Building Use Category	GENERAL USE

ORDER # 127470 BUILDER - S M ANDERSEN CO., INC. BLDR ORDER # 1801_PO10 BLDR ACCOUNT # 20-36-051-07
BLDR CONTACT - RICK BROCKWAY BLDR PHONE # 503-860-7963 PROJ NAME - MCCORMICK_AND_BAXTER ENGR GRP - Visalia

COMPLEX - NO	(TYPE)	(WIDTH)	(LENGTH)	(HEIGHT)	(SNOW)	(WIND)	(CODE/YEAR)	(SLOPE)
UNIT # 1 BLDG DESCRIPTION	LRF	25' 0" 0/32 X	40' 0" 0/32 X	10' 2" 20/32	25 PSF	100 MPH	IBC 03	2.000:12
(COLUMN SHAPE)		(COLUMN KNEE)		(COLUMN OFFSET)			(GIRT DEPTH)	
LSW: TAPERED RSW: TAPERED		LSW: HORIZONTAL RSW: HORIZONTAL		LSW: 1 1/4" RSW: 1 1/4"			LSW: 9 1/2" RSW: 9 1/2"	

ACTUAL DESIGN LOADS

LIVE LOAD

INTERMEDIATE FRAME	ENDWALL STRUCTURALS	ROOF STRUCTURALS
25.0 psf FRAMES: 1	25.0 psf FEW 25.0 psf REW	26.3 psf BAYS: 1, 2

COLLATERAL LOAD

INTERMEDIATE FRAME	ENDWALL STRUCTURALS	ROOF STRUCTURALS
5.00 psf FRAMES: 1	5.00 psf FEW 5.00 psf REW	5.00 psf BAYS: 1, 2

WIND SPEED

INTERMEDIATE FRAME	ENDWALL STRUCTURALS	SIDEWALL STRUCTURALS	BRACING	ROOF STRUCTURALS
100.00 mph FRAMES: 1	100.00 mph FEW 100.00 mph REW	100.00 mph RSW 100.00 mph LSW	100 mph	100.00 mph BAYS: 1, 2

WIND COEFFICIENT (* INDICATES OVERRIDE)

	PRESSURE	SUCTION		UPLIFT
All girts	0.950	-1.050	Roof Structurals	-0.980
Bracing	0.400	-0.290		

ORDER # 127470 BUILDER - S M ANDERSEN CO., INC. BLDR ORDER # 1801_PO10 BLDR ACCOUNT # 20-36-051-07
BLDR CONTACT - RICK BROCKWAY BLDR PHONE # 503-860-7963 PROJ NAME - MCCORMICK_AND_BAXTER ENGR GRP - Visalia

COMPLEX - NO		(TYPE)	(WIDTH)	(LENGTH)	(HEIGHT)	(SNOW)	(WIND)	(CODE/YEAR)	(SLOPE)
UNIT # 1	BLDG DESCRIPTION	LRF	25' 0" 0/32 X	40' 0" 0/32 X	10' 2" 20/32	25 PSF	100 MPH	IBC 03	2.000:12

1 DESCRIPTION

1.1 GENERAL

The primary structural system consists of rigid frames designed as clear span or with interior columns as a modular rigid frame. The end frames consist of H-Section beams and H or C Section posts arranged as described below. Purlins and eave struts spanning between the frames support the roof panels. The wall panels span from the base to the eave and may be supported at the intermediate points by girts spanning between the frames.

1.2 RIGID FRAMES

The rigid frames consist of tapered or straight welded-up plate section exterior columns and roof beams with bolted splices. For modular frames, interior columns are straight sections. The minimum yield of the steel used for flanges and webs is 55 ksi.

1.3 END FRAMES

Endwall framing has two options:

(1) H-Section roof beams and Light gage "C" Section posts or H-Section posts designed as a pinned frame. Lateral support is provided by cross bracing in the plane of the endwall or in the roof. Endwall roof beams and H-Section posts are welded members using 55 ksi steel for flanges and webs. "C" Section posts may be single or double 12" members fabricated from 60 ksi minimum yield material.

(2) H-Section roof beams and posts designed as a modular rigid frame. Lateral support is provided by frame action and bracing in the plane of the endwall where required. The minimum yield of the steel used for flanges and webs is 55 ksi.

1.4 SECONDARY FRAMING

The secondary framing consists of purlins, girts, and eave struts cold-formed from 60 ksi minimum yield material. Purlins and girts are Z-shaped members and eave struts are C-shaped.

2 DESIGN SPECIFICATIONS

All structural mill sections or welded-up plate sections are designed in accordance with the AISC SPECIFICATION FOR THE DESIGN, FABRICATION, AND ERECTION OF STRUCTURAL STEEL FOR BUILDINGS.

All cold-formed structural members are designed in accordance with the AISI SPECIFICATION FOR THE DESIGN OF COLD-FORMED STEEL STRUCTURAL MEMBERS.

)RDER # 127470 BUILDER - S M ANDERSEN CO., INC. BLDR ORDER # 1801 PO10 BLDR ACCOUNT # 20-36-051-07
3LDR CONTACT - RICK BROCKWAY BLDR PHONE # 503-860-7963 PROJ NAME - MCCORMICK AND BAXTER ENGR GRP - Visalia

COMPLEX - NO		(TYPE)	(WIDTH)	(LENGTH)	(HEIGHT)	(SNOW)	(WIND)	(CODE/YEAR)	(SLOPE)
JNIT # 1	BLDG DESCRIPTION	LRF	25' 0" 0/32 X	40' 0" 0/32 X	10' 2" 20/32	25 PSF	100 MPH	IBC 03	2.000:12

3 METHOD OF ANALYSIS

3.1 RIGID FRAMES

The rigid frame is designed using the stiffness analysis method. The frame is designed with pinned connections at the column bases. Modular frames with interior columns are designed with pinned connections at the column top. The indeterminate reaction analysis for this frame uses the energy method considering bending only. To account for the changing sections of the frame, summations are obtained by dividing the frame into a number of individual sections and adding the frame coefficients of these sections.

3.2 ENDWALL FRAMING

Endwall framing has two options. Option 1 is a Pinned Endwall consisting of H-Section roofbeams designed as simple or continuous supported by endwall posts designed as pinned end members. Option 2 is a Rigid Endwall consisting of H-Section roof beams and posts designed as modular rigid frames with or without endwall bracing. g of

3.2.1 Pinned Endwall Option

3.2.1.1 Endwall Posts

Endwall posts will be designed as pinned end members (simple span) to resist the moment and shear caused by wind load from the tributary wall area and the axial load caused by the vertical forces (dead load, live load, uplift) from the tributary roof area. All roof and wall loads will be considered uniformly distributed. Endwall posts will be assumed to be loaded through the shear center. The posts will be considered adequately braced against torsional-flexuraly buckling by the panels and girts. Girt locations will be considered inner and outer flange brace points. Moments and forces will be determined in accordance with the above specifications and procedures.

3.2.1.2 Endwall Roof Beams

Endwall roof beams will be designed as simple span or continuous members depending on post arrangement. Eave connections will be considered to provide pinned end support as will the ridge connection when a post is situated under the ridge. The roof beams will be designed to resist the shear and moment caused by the dead load, live load, and wind uplift applied to the tributary roof area. The endwall panel weight (1.1 psf x eave height) will be deducted from the applied uplift load. Purlins will brace the top flange and flange braces will brace the bottom flange of roof beams. Allowable moment capacity will be computed in accordance with the AISI Specification. Moments and forces will be determined in accordance with the above specifications and procedures.

3.2.2 Rigid Endwall Option

The rigid frame endwall consists of straight welded-up plate section corner columns, endwall posts, and roof beams with bolted splices. The minimum yield of the steel used for flanges and webs is 55 ksi. Endwall posts are designed as pinned end members (simple span) to resist the moment and shear caused by the wind load on the endwall and axial load caused by the vertical forces from the roof. Some frames will also be designed with rod bracing attached at the base and top of the endwall post to act in conjunction with the rigid frame action of the frame to resist the force caused by the wind load on the sidewalls.

ORDER # 127470 BUILDER - S M ANDERSEN CO., INC. BLDR ORDER # 1801_PO10 BLDR ACCOUNT # 20-36-051-07
BLDR CONTACT - RICK BROCKWAY BLDR PHONE # 503-860-7963 PROJ NAME - MCCORMICK_AND_BAXTER ENGR GRP - Visalia

	(TYPE)	(WIDTH)	(LENGTH)	(HEIGHT)	(SNOW)	(WIND)	(CODE/YEAR)	(SLOPE)
COMPLEX - NO								
UNIT # 1 BLDG DESCRIPTION	LRF	25' 0" 0/32	X 40' 0" 0/32	X 10' 2" 20/32	25 PSF	100 MPH	IBC 03	2.000:12

3.3 SECONDARY FRAMING

3.3.1 Purlins, Eave Struts, And Girts

Purlins and girts may be designed as simple span or continuous beams. Eave struts are designed as simple span beams. All members are designed using the stiffness analysis method. The purlins and eave struts are designed for the shear and moment caused by live load or uplift on the tributary roof area and the axial load caused by wind on the tributary endwall area. The girts are designed for the shear and moment caused by wind pressure or suction applied to the tributary wall area. All loads are assumed uniformly distributed, but tapered and concentrated loads can be input and considered in the design. The section is optimized for either allowable forces, moments, or live load deflection in accordance with the above listed specifications and procedures.

3.3.2 Roof Panels

Panels will be designed as continuous span members. All live or snow loads and wind pressure or suction are assumed uniformly distributed.

3.3.3 Wall Panels

Panels will be designed as simple span (no girts) or continuous span (with girts) members. The panels will be designed assuming a uniformly distributed wind pressure or suction. Maximum panel spans will be developed in accordance with the above specifications and procedures.

3.4 WIND BRACING

The standard wind bracing is provided by using brace rods. Alternate wall bracing can be provided by using portal frames, wind posts, or panel diaphragms.

Brace rods will be designed as tension members in accordance with the applicable provisions of AISC. Rods 0.75 inch in diameter and less will have a minimum 80 ksi ultimate tensile strength. Rods larger than 0.75 inch in diameter will have a minimum 70 ksi ultimate tensile strength.

Bracing design based on panel diaphragm action will require a lineal footage of full height panels determined by eave height and wind loading.

ORDER # 127470 BUILDER - S M ANDERSEN CO., INC. BLDR ORDER # 1801_PO10 BLDR ACCOUNT # 20-36-051-07
BLDR CONTACT - RICK BROCKWAY BLDR PHONE # 503-860-7963 PROJ NAME - MCCORMICK_AND_BAXTER ENGR GRP - Visalia

		(TYPE)	(WIDTH)	(LENGTH)	(HEIGHT)	(SNOW)	(WIND)	(CODE/YEAR)	(SLOPE)
COMPLEX - NO									
UNIT # 1	BLDG DESCRIPTION	LRF	25' 0" 0/32	X 40' 0" 0/32	X 10' 2" 20/32	25 PSF	100 MPH	IBC 03	2.000:12

3.4.1 Roof And Sidewall Bracing

The standard wind bracing to be provided in all buildings is a parallel chord Pratt truss in the roof and "X" diagonal rod members in the wall.

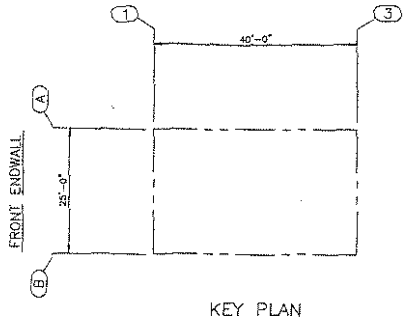
The rod loads are computed by summing the windward and leeward endwall post reactions which act between the ridge of the building and the strut whose load the brace rod is transferring down the roof. If more than one braced bay exists, it is assumed that the accumulated wind load is distributed equally to each braced bay. Hence the sum computed above is divided by the number of braced bays. The rod load is determined by dividing the strut load by the cosine of the angle between the strut and the brace rod.

The braced bay sidewall reactions are the horizontal and vertical resolution of the load in the sidewall rods.

3.4.2 Endwall Bracing

The endwall bracing for the Pinned Endwall will be designed as the lateral support system of the frame.

Endwall bracing for the Rigid Endwall will be designed to act in conjunction with the rigid frame action of the frame to resist the forces caused by the wind load on the sidewalls.



KEY PLAN

SPECIFIC ERECTION DRAWING LIST

THE DRAWINGS LISTED BELOW HAVE BEEN CREATED BY COMPUTER SPECIFICALLY FOR YOUR ORDER TO ASSIST YOU IN PUTTING UP YOUR BUILDING. THESE SPECIFIC ERECTION DRAWINGS ARE THE SAME SIZE AS THIS SHEET AND CAN BE IDENTIFIED INDIVIDUALLY FROM THE TITLES AND DRAWING SEQUENCE NUMBERS THAT APPEAR IN THE LOWER RIGHT HAND CORNER OF EACH DRAWING.

DRAWING TITLE:	AC FILE NO.:	
	DATE: 02/16/83	
ROOF SECONDARY STRUCTURAL FRAMING PLAN	DRAWING NUMBER: D 83-123456-05L	REVISION 02

TITLE — THE YEAR DURING WHICH YOUR ORDER WAS ENTERED — THE BUTLER ORDER NUMBER OF YOUR ORDER — DRAWING SEQUENCE NUMBER — REVISION LEVEL OF THE DRAWING. IF THE DRAWING HAS NEVER BEEN REVISED, 00 APPEARS HERE.

D05-127470-00 COVER DRAWING - SHEET 1
D05-127470-01 SPECIFIC ANCHOR BOLT DRAWING - SHEET 1
D05-127470-01A SPECIFIC REACTION DRAWING - SHEET 2
D05-127470-01B ANCHOR BOLT DETAIL SHEET - SHEET 3
D05-127470-02 CROSS SECTION ERECTION DRAWING - SHEET 1
D05-127470-02A CROSS SECTION ERECTION DRAWING - SHEET 2
D05-127470-02B CROSS SECTION ERECTION DRAWING DETAIL SHEET - SHEET 3
D05-127470-03 WIND BRACING DRAWING - SHEET 1
D05-127470-03A WIND BRACING DETAIL SHEET - SHEET 2
D05-127470-04 ROOF SECONDARY STRUCTURAL FRAMING PLAN - SHEET 1
D05-127470-04A ROOF SECONDARY STRUCTURAL DETAIL SHEET - SHEET 2
D05-127470-05 WALL SECONDARY STRUCTURAL ELEVATION - SHEET 1
D05-127470-05A WALL SECONDARY STRUCTURAL ELEVATION - SHEET 2
D05-127470-05B WALL SECONDARY STRUCTURAL ELEVATION DETAIL SHEET - SHEET 3

SUPPLEMENTING THE SPECIFIC ERECTION DRAWINGS LISTED ARE SEVERAL GENERAL ERECTION DRAWINGS CALLED "FLANIGRAPHS". SEE THE DRAWING MANIFEST FOR A COMPLETE LIST OF THESE DRAWINGS.

DESIGN CRITERIA SUMMARY

The 2003 edition of the "International Building Code" by the International Code Council, Inc.

Building Use Category	GENERAL USE
Collateral Load(Mechanical and Electrical)	5.00 psf
Roof Panel Dead Load	1.20 psf
Live Load	
Roof Live Load	20 psf
Tributary Load Reduction (Y/N)	Y
Snow Load	
Ground Snow Load (Pg)	25.00 psf
Snow Importance Factor (I)	1.00
Snow Exposure Factor (Ce)	0.70
Exposure of Roof	Partial Exposed Rf
Terrain Category	C
Thermal Condition	Normal
Roof Snow Load (Pf)	25.00 psf
Wind Load	
Wind Speed	100 mph
Wind Importance Factor	1.00
Enclosure Classification	Enclosed
Wind Exposure Factor	C
Seismic Load	
Spectral Response Acc. (Ss)	100%
Spectral Response Acc. (S1)	32%
Seismic Design Category	D
Soil Profile Type	D

Basic Struc. System	Seismic Res. System	Response Mod. Factor	Deflection Amp. Factor
Bracing			
Bldg. Frm. System	Concentrically braced frames	5.00	3.00
Main Frames			
Moment-Res. Frm. System	Ordinary moment frames of steel	3.50	3.00

Analysis Procedure: Equivalent Lateral Force Procedure

FIELD WORK SUMMARY

WALL SECONDARY

FW0030 FIELD LOCATE SLOTS IN SIDEWALL GIRT FOR SIDEWALL ROD BRACING CONDITION.

FW0045 FIELD WORK GIRT CHANNEL AT CORNER BUILDING CONDITION.

COVER DRAWING NOTES

STANDARD NOTES:

CD0001 ATTACH PATENT PLATE 207849 TO THE WEB OF AN INTERMEDIATE FRAME COLUMN AT EYE LEVEL.

CD0002 PARTS SHOWN MAY BE UPGRADED DUE TO STANDARDIZED FABRICATION. REFER TO THE SHIPPING MANIFEST FOR POSSIBLE SUBSTITUTIONS.

CD0013 IF THESE DRAWINGS ARE SEALED, THE SEAL APPLIES ONLY TO THE MATERIALS SUPPLIED BY BUTLER MFG. CO. AND IS NOT INTENDED AS THE SEAL OF THE ENGINEER OF RECORD FOR THE ENTIRE PROJECT.

CD0017 MATERIALS

	ASTM DESIGNATION	
STRUCT PLATE 1" & LESS	A529 AND A572	FY = 55 KSI (GRADE 55)
STRUCT PLATE OVER 1"	A529 AND A572	FY = 50 KSI (GRADE 50)
LIGHT GAGE/COLD FORMED	EQUIV TO A1011	FY = 80 KSI (GRADE 80)
ROOF AND WALL PANELS	A653 AND A792	GRADE 50, 80
ROUND TUBE	A500 GRADE B	FY = 42 KSI
SQUARE TUBE	A500 GRADE B	FY = 46 KSI
BRACE RODS 3/4" & LESS	A510 GRADE 1018	
BRACE RODS OVER 3/4"	A572 GRADE 50 OR GREATER	

CD0026 1/2" DIA. BOLTS AND NUTS ARE FURNISHED AS AN ASSEMBLY. THE DRAWINGS CALL OUT THESE BOLTS AND NUTS BY THEIR COMPONENT NO'S. ASSEMBLY CONTAINS

0097461	1/2X1-1/4 BOLT (0095085) AND NUT (0095032)
0097462	1/2X1-1/4 THN HD BOLT (0096836) AND NUT (0095032)
0097463	1/2X1-1/2 BOLT (0095195) AND NUT (0095032)
0097464	1/2X1-3/4 GALV BOLT (0095331) AND (0095032)
0097465	1/2X2 A325T BOLT (0097280) AND (0095230)

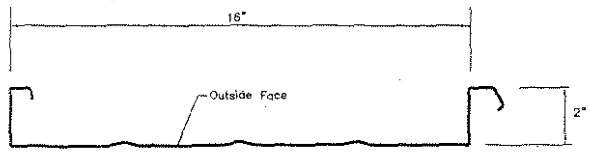
CD0028 HIGH STRENGTH BOLTING:

ALL HIGH STRENGTH BOLTS USED IN PRIMARY FRAME CONNECTIONS ARE A325 WITH HEAVY HEX NUTS AND ARE TO BE INSTALLED USING THE "TURN-OF-THE-NUT" METHOD SPECIFIED IN THE "SPECIFICATION FOR STRUCTURAL JOINTS USING ASTM A325 OR A490 BOLTS" PUBLISHED BY RCSC, DATED JUNE 23, 2000. A325 BOLTS MAY BE INSTALLED WITHOUT WASHERS WHEN TIGHTENED BY THE TURN-OF-THE-NUT METHOD. IT IS THE RESPONSIBILITY OF THE ERECTOR TO ASSURE PROPER TIGHTNESS. SEE INSTALLATION OF A A325 BOLT DRAWING 1080288.

VSR® Roof System – Panel

PANEL DESIGN DATA

Calculated sectional properties for VSR® roof system panel materials use the 1996 edition of AISI design manual.



Section Through Panels

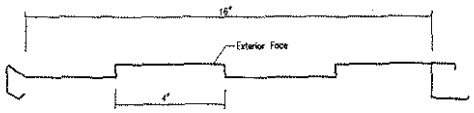
Section Properties for One Foot of Width

Panel Material	Design Thick (in.)	Fy (ksi)	E (ksi)	Weight (#/Sq.Ft.)	Compression on Outside Sx (in3)	Compression on Outside I (in4)	Compression on Inside Sx (in3)	Compression on Inside I (in4)
24 GA. Steel, 50 ksi	0.0225	50	29.5	1.35	0.0580	0.1439	0.0586	0.0639

Stylwall® II Wall System – Panel

PANEL DESIGN DATA

Calculated sectional properties for Stylwall™ II wall panel materials use the 1996 edition of AISI design manual.



FLUTED

Section Through Panels

Section Properties for One Foot of Width

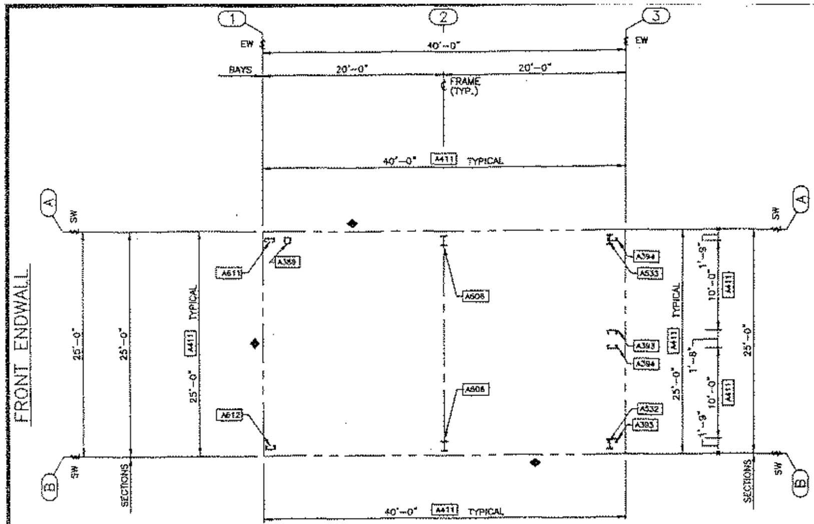
Panel Material	Design Thick (in.)	Fy (ksi)	E (ksi)	Weight (#/Sq.Ft.)	Compression on Outside Sx (in3)	Compression on Outside I (in4)	Compression on Inside Sx (in3)	Compression on Inside I (in4)
24 GA. Steel, 50 ksi	0.023	50	29.5	1.53	0.1520	0.1400	0.1340	0.2270

4-1-05

REVISION NO. 1	REVISION NO. 2						
DATE:	DATE:	BUTLER MANUFACTURING COMPANY, GENERAL OFFICES-KANSAS CITY, MISSOURI	PRODUCT OF THE TRINITY ORDER ENGINEERING SYSTEM	BUILDER: S M ANDERSEN CO., INC. PORTLAND, OR	PROJECT: MCCORMICK AND BAXTER PORTLAND, OREGAN	BUILDING ORDER DESCRIPTION: 25X40X10 LRF 25# ROOF SL + 5#CLL 100 MPH EXP C IBC 03 SEISMIC DESIGN CAT D	DRAWING TITLE: COVER DRAWING
DRAWN BY:	DRAWN BY:						
CHECKED BY:	CHECKED BY:						

DRW: BEFTEKHAR ENG:
CHK: DATE: 03/31/05
DRAWING NUMBER: D05-127470-00 REV: 00

USERNAME: AOGierlo 04-01-2005 08:17:43



ANCHOR BOLT PLAN

STANDARD NOTES:

AB0007 GIVE TOP OF FOUNDATION A TROWEL FINISH. THE FOUNDATION MUST BE SQUARE, LEVEL AND SMOOTH.

AB0009 ANCHOR BOLTS MUST BE LOCATED BY MEANS OF A TEMPLATE. DO NOT HAND SET ANCHOR BOLTS.

AB0010 ANCHOR BOLTS MUST BE ASTM F1554, GRADE 36.

AB0013 USE REINFORCING STEEL AS REQUIRED. PROVIDE FOR HORIZONTAL LOAD ON ANCHOR BOLTS.

AB0014 C A U T I O N

RIGID FRAMES HAVE BOTH HORIZONTAL AND VERTICAL REACTIONS ACTING AT THE BASE OF THE COLUMN. IN SOME CASES THE HORIZONTAL FORCE IS GREATER THAN THE VERTICAL. A FOUNDATION DESIGNED FOR A CONVENTIONAL STRUCTURE WILL NOT BE SATISFACTORY. FAILURE TO MAKE ADEQUATE PROVISION FOR THE HORIZONTAL THRUST CAN RESULT IN FOUNDATION FAILURE.

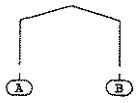
AB0015 FOUNDATION DESIGN AND ANCHOR BOLTS, NUTS AND WASHERS ARE NOT FURNISHED BY BUTLER. PROPER EMBEDMENT LENGTH MUST BE DESIGNED BY FOUNDATION DESIGN ENGINEER.

AB0016 REFER TO WALL PANEL ANCHOR BOLT DRAWING FOR SPECIFIC EDGE OF FOUNDATION DETAILS.

AB0017 THE SOLID BLACK <> SYMBOL DESIGNATES A BRACED BAY OR SECTION.

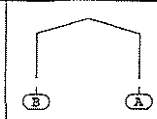
REVISION NO. 1	REVISION NO. 2		PRODUCT OF THE	BUILDER:	PROJECT:	BUILDING ORDER DESCRIPTION:	DRAWING TITLE:	DRW: BEFTEKHAR	ENG:
DATE: / DRAWN BY: / CHECKED BY:	DATE: / DRAWN BY: / CHECKED BY:	BUTLER BUTLER MANUFACTURING COMPANY GENERAL OFFICES-KANSAS CITY, MISSOURI	PRONTO® ORDER ENGINEERING SYSTEM	S M ANDERSEN CO., INC. PORTLAND, OR	MCCORMICK AND BAXTER PORTLAND, OREGAN	25X40X10 LRF 25# ROOF SL + 5#CLL 100 MPH EXP C IBC 03 SEISMIC DESIGN CAT D	SPECIFIC ANCHOR BOLT DRAWING	CHK: / DRAWING NUMBER: D05-127470-01	DATE: 03/31/05 / REV. 00

USERNAME: ADOsorio 03-31-2005 14:24:30



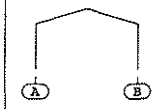
ENDWALL FRAME AT SIDEWALL GRID 1

		A			B		
		H	V	Z	H	V	Z
DL	DEAD LOAD	-0.23	0.57	0.00	0.23	0.57	0.00
CLL	COLLATERAL LOAD	-0.27	0.64	0.00	0.27	0.64	0.00
SL	SNOW LOAD	-1.33	3.20	0.00	1.33	3.20	0.00
WLL	WIND LOAD LEFT	-1.57	-3.64	0.00	-0.40	-1.26	0.00
WLR	WIND LOAD RIGHT	0.40	-1.26	0.00	1.57	-2.64	0.00
IP	WIND INT PRESSURE	0.19	-0.43	-0.19	-0.19	-0.43	-0.19
IS	WIND INT SUCTION	-0.29	0.43	0.19	0.29	0.43	0.19
EQ	SEISMIC LOAD	-0.59	-0.22	0.00	-0.02	0.22	0.00
SLL	SNOW LOAD LEFT SLOPE	-0.70	2.59	1.00	0.70	0.78	0.00
SLR	SNOWLOAD RIGHT SLOPE	-0.70	0.78	0.00	0.70	2.59	0.00
EWP	EW WIND PRESSURE	0.35	-2.54	0.63	-0.39	-2.54	0.63
EWS	EW WIND SUCTION	0.39	-2.54	-0.44	-0.39	-2.54	-0.44
PLO	PATT LL ODD SPANS	-1.01	2.42	0.00	1.01	2.42	3.00
PLI	PATT LL SPAN W-1	-1.01	2.42	3.00	1.01	2.42	3.00
PDE	P Delta Unit Story S	-0.50	-0.38	0.00	0.50	0.38	0.00
	MAX. POS. REACTION	0.55	4.41	0.81	1.90	4.41	0.81
	MAX. NEG. REACTION	-1.90	-2.72	-0.63	-0.55	-2.72	-0.63



ENDWALL FRAME AT SIDEWALL GRID 3

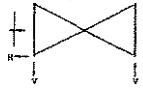
		B			A		
		H	V	Z	H	V	Z
DL	DEAD LOAD	0.18	0.63	0.00	-0.18	0.63	0.00
CLL	COLLATERAL LOAD	0.20	0.84	0.00	-0.20	0.84	0.00
SL	SNOW LOAD	1.02	3.20	0.00	-1.02	3.20	0.00
WLL	WIND LOAD LEFT	-1.68	-2.62	0.00	-0.29	-1.28	0.00
WLR	WIND LOAD RIGHT	0.29	-1.28	0.00	1.68	-2.62	0.00
IP	WIND INT PRESSURE	-0.03	-0.43	-0.19	-0.03	0.43	-0.19
IS	WIND INT SUCTION	-0.03	0.43	0.19	-0.03	0.43	0.19
EQ	SEISMIC LOAD	-0.30	-0.22	0.00	-0.30	0.22	0.00
SLL	SNOW LOAD LEFT SLOPE	0.54	2.56	0.00	-0.54	0.80	0.00
SLR	SNOWLOAD RIGHT SLOPE	0.54	0.80	0.00	-0.54	2.56	0.00
EWP	EW WIND PRESSURE	-0.37	-2.54	0.62	0.37	-2.54	0.62
EWS	EW WIND SUCTION	-0.37	-2.54	-0.44	0.37	-2.54	-0.44
PLO	PATT LL ODD SPANS	0.77	2.42	0.00	-0.77	2.42	3.00
PLI	PATT LL SPAN W-1	0.77	2.42	0.00	-0.77	2.42	3.00
PDE	P Delta Unit Story S	0.00	-0.37	0.00	0.00	0.37	0.00
	MAX. POS. REACTION	1.41	4.47	0.81	1.60	4.47	0.81
	MAX. NEG. REACTION	-1.68	-2.67	-0.62	-1.41	-2.67	-0.62



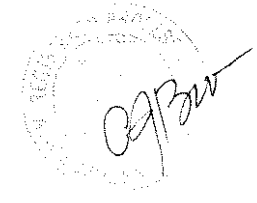
FRAME AT SIDEWALL GRID 2

		A		B	
		H	V	H	V
DL	DEAD LOAD	0.29	0.98	-0.29	0.98
CLL	COLLATERAL LOAD	0.40	1.25	-0.40	1.25
SL	SNOW LOAD	2.02	6.25	-2.02	6.25
WLL	WIND LOAD LEFT	-2.20	-3.38	-0.40	-1.70
WLR	WIND LOAD RIGHT	0.40	-1.70	2.20	-3.38
IP	WIND INT PRESSURE	0.05	-0.82	-0.05	0.82
IS	WIND INT SUCTION	-0.05	0.82	0.05	0.82
EQ	SEISMIC LOAD	-0.59	-0.42	-0.59	0.42
SLL	SNOW LOAD LEFT SLOPE	1.06	4.39	-1.06	1.57
SLR	SNOWLOAD RIGHT SLOPE	1.06	1.57	-1.06	4.99
EWP	EW WIND PRESSURE	-0.24	-3.19	0.24	-3.19
EWS	EW WIND SUCTION	-0.24	-3.19	0.24	-3.19
PLO	PATT LL ODD SPANS	1.13	1.58	-1.13	3.58
PLI	PATT LL SPAN W-1	1.13	1.58	-1.13	3.58
PDE	P Delta Unit Story S	0.00	-0.36	0.00	0.36
	MAX. POS. REACTION	2.71	8.45	2.08	8.45
	MAX. NEG. REACTION	-2.08	-3.81	-2.71	-3.81

BRACED BAY REACTION



SIDEWALL GRID	BETWEEN GRIDS	H (WL)	V (WL)	H (EQ)	V (EQ)
A	1- 2	1	1	1	1
B	2- 3	1	1	1	1



REACTION NOTES:

1. THE VERTICAL (V) AND HORIZONTAL (H AND Z) REACTION ARE STATED IN KIPS. (1 KIP = 1000 POUNDS) POSITIVE DIRECTION IS AS SHOWN IN THE FOLLOWING DIAGRAM.

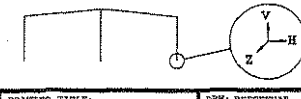
2. MOMENT REACTIONS ARE STATED IN INCH-KIPS AND ARE POSITIVE IN A COUNTERCLOCKWISE DIRECTION.

3. THE FORCE ON THE ANCHOR BOLTS OR FOUNDATION WILL BE IN THE OPPOSITE DIRECTION TO THAT SHOWN.

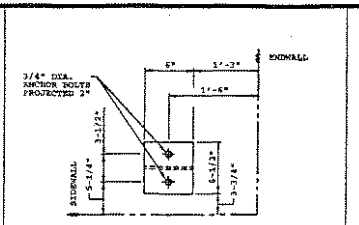
4. MAXIMUM REACTION SUMMARY IS THE MAXIMUM POSITIVE AND NEGATIVE REACTIONS BASED ON THE REQUIRED LOAD COMBINATIONS.

5. SEISMIC REACTIONS SHOWN ARE CONSISTENT WITH THE BASE SHEAR (V) FROM THE SPECIFIED BUILDING CODE WITHOUT ADJUSTMENT FACTORS.

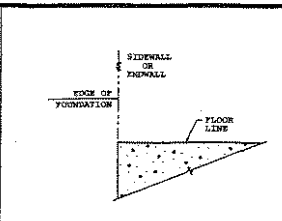
6. THE WIND LOAD BRACING REACTIONS DO NOT INCLUDE EWP, EWS AND IP REACTIONS FROM THE INTERMEDIATE FRAME. THESE REACTIONS SHOULD BE ADDED TO GET THE TOTAL REACTIONS FOR THE FOUNDATION DESIGN.



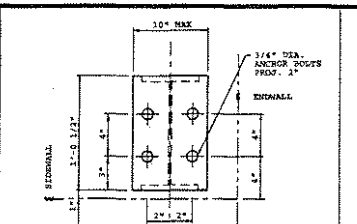
REVISION NO. 1	REVISION NO. 2						
DATE:	DATE:	BUTLER MANUFACTURING COMPANY GENERAL OFFICES-KANSAS CITY, MISSOURI	PRODUCT OF THE ROMTO® ORDER ENGINEERING SYSTEM	BUILDER: S M ANDERSEN CO., INC. PORTLAND, OR	PROJECT: MCCORMICK AND BAXTER PORTLAND, OREGAN	BUILDING ORDER DESCRIPTION: 25X40X10 LRF 25# ROOF SL + 5#CLL 100 MPH EXP C IBC 03 SEISMIC DESIGN CAT D	DRAWING TITLE: SPECIFIC REACTION DRAWING	DRW: BEPTERHAR CHK: DRAWING NUMBER: D05-127470-01A	ENG: DATE: 03/31/05 REV. 00
DRAWN BY:	DRAWN BY:								
CHECKED BY:	CHECKED BY:								



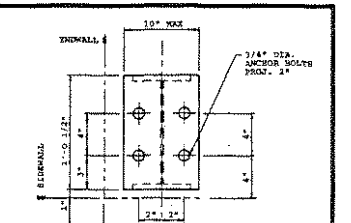
DETAIL A388 | BRACE ROD BASE CLIP (RIGHT)



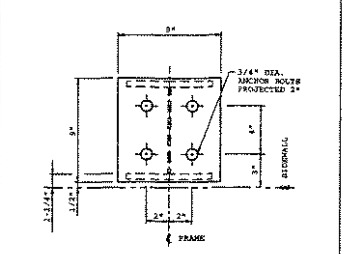
SECTION A613 | TYP. SECTION AT EDGE OF FOUNDATION UN-NOTCHED BASE



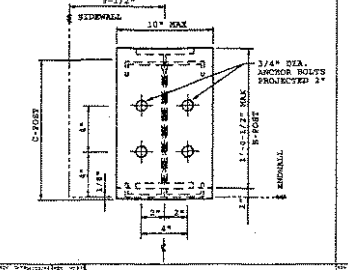
DETAIL A532 | CORNER COLUMN



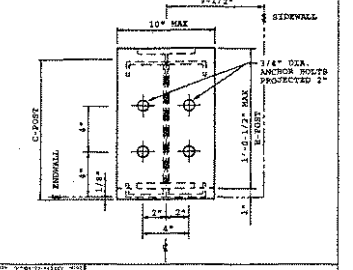
DETAIL A533 | CORNER COLUMN



DETAIL A606 | SIDEWALL COLUMN

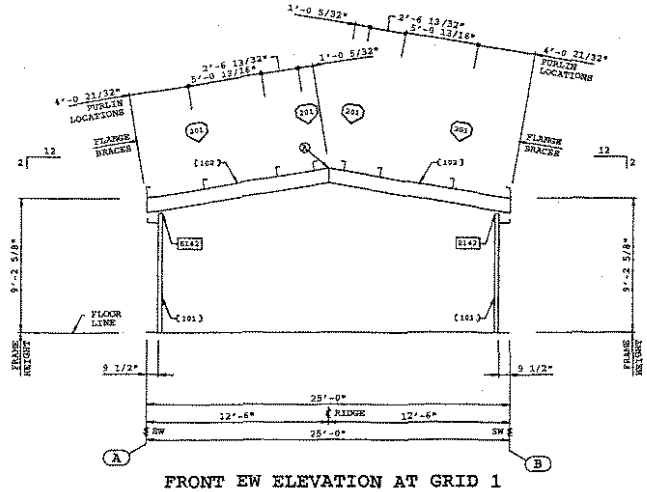


DETAILA611 | CORNER EW H-POST OR C-POST (LEFT)

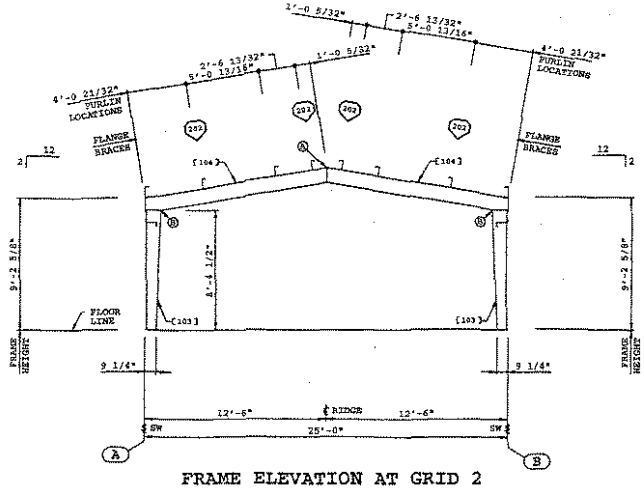


DETAILA612 | CORNER EW H-POST OR C-POST (RIGHT)

REVISION NO. 1	REVISION NO. 2							
DATE:	DATE:	BUTLER MANUFACTURING COMPANY GENERAL OFFICES-KANSAS CITY, MISSOURI	PRODUCT OF THE FRONTO® ORDER ENGINEERING SYSTEM	BUILDER:	PROJECT:	BUILDING ORDER DESCRIPTION:	DRAWING TITLE:	DRW: DEPTEDOUR CHK: ENG: DATE: 03/31/05
DRAWN BY:	DRAWN BY:			S M ANDERSEN CO., INC. PORTLAND, OR	MCCORMICK AND BAXTER PORTLAND, OREGAN	25X40X10 LRF 25# ROOF SL + 5#CLL 100 MPH EXP C IBC 03 SEISMIC DESIGN CAT D	ANCHOR BOLT DETAIL SHEET	DRAWING NUMBER: D05-127470-01B REV. 00
CHECKED BY:	CHECKED BY:							



FRONT EW ELEVATION AT GRID 1



FRAME ELEVATION AT GRID 2

PART SCHEDULE

[ ]	PART NAME	PART NUMBER	PART LENGTH	FIELD WORK ▲
101	12" SGL ENDWALL FO	600815 098-0	8'-2"	
102	EW ROOF BEAM	Y37478	12'-7 15/16"	
103	EXTERIOR COLUMN	Y37480	8'-4 1/2"	
104	ROOF BEAM	Y37482	12'-7 15/16"	

BOLTED CONNECTION SCHEDULE

○	QUANTITY	BOLT NO.	DESCRIPTION	NUT NO.	DETAIL
A	34	097282	5/8X2-1/4 BOLT A325T	095233	
B	04	097284	5/4X2-1/2 HS BOLT A3	095215	

FLANGE BRACE SCHEDULE

○	PART NO. FRONT/LEFT	PART NO. REAR/RIGHT	DIM. "Y"	DETAIL	FIELD WORK ▲
201	545100		10 1/2"	C347	
202	545100		10 1/2"	C347	

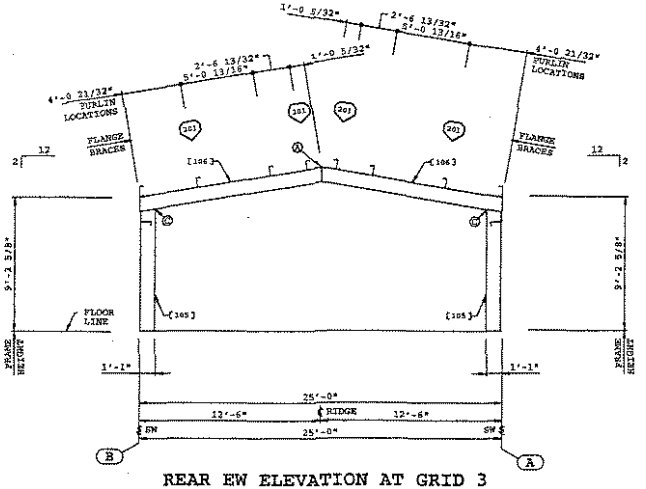
STANDARD NOTES:

IF0009 1/2" DIA. BOLTS AND NUTS ARE FURNISHED AS AN ASSEMBLY. THE DRAWINGS CALL OUT THESE BOLTS AND NUTS BY THEIR COMPONENT NO'S.

ASSEMBLY	CONTAINS	
0097461	1/2X1-1/4 BOLT (0095085) AND NUT (0095032)	
0097462	1/2X1-1/4 THN HD BOLT (00966361) AND NUT (0095032	1
0097463	1/2X1-1/2 BOLT (0095195) AND NUT (0095032)	
0097464	1/2X1-3/4 GALV BOLT (0095331) AND (0095032)	
0097465	1/2X2 A325T BOLT (0097280) AND (0095230)	

IF0011 ALL HIGH STRENGTH BOLTS USED IN PRIMARY FRAME CONNECTIONS ARE A-325-T WITH HEAVY HEX NUTS AND ARE TO BE INSTALLED USING THE "TURN-OF-THE-NUT" METHOD SPECIFIED IN THE "SPECIFICATION FOR STRUCTURAL JOINTS USINGASTM A325 OR A490 BOLTS", PUBLISHED BY RCSC, DATED JUNE 23, 2000. A-325 BOLTS MAY BE INSTALLED WITHOUT WASHERS WHEN TIGHTENED BY THE TURN-OF-THE-NUT METHOD. IT IS THE RESPONSIBILITY OF THE ERECTOR TO ASSURE PROPER TIGHTNESS. SEE INSTALLATION OF A-325 BOLT DRAWING 1080268.

REVISION NO. 1	REVISION NO. 2			BUILDER:	PROJECT:	BUILDING ORDER DESCRIPTION:	DRAWING TITLE:	DRN: BEFTEMAN	ENG:
DATE:	DATE:	BUTLER MANUFACTURING COMPANY GENERAL OFFICES-KANSAS CITY, MISSOURI	PRODUCT OF THE TRONTO® ORDER ENGINEERING SYSTEM	S M ANDERSEN CO., INC. PORTLAND, OR	MCCORMICK AND BAXTER PORTLAND, OREGAN	25X40X10 LRF 25# ROOF SL + 5#CLL 100 MPH EXP C IBC 03 SEISMIC DESIGN CAT D	CROSS SECTION ERECTION DRAWING	CHK:	DATE: 03/31/05
DRAWN BY:	DRAWN BY:							DRAWING NUMBER: D05-127470-02	REV. 00
CHECKED BY:	CHECKED BY:								



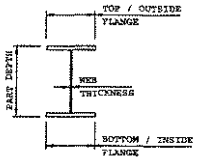
REAR EW ELEVATION AT GRID 3

PART SCHEDULE				
[ ]	PART NAME	PART NUMBER	PART LENGTH	FIELD WORK ▲
105	EW CORNER POST	Y37488	8'-2 5/8"	
106	EW ROOF BEAM	Y37490	12'-7 15/16"	

BOLTED CONNECTION SCHEDULE					
○	QUANTITY	BOLT NO.	DESCRIPTION	NUT NO.	DETAIL
A	04	097282	5/8X2-1/4 BOLT A325T	095233	
C	08	097281	5/8X1-1/2 HS BOLT A3	095233	

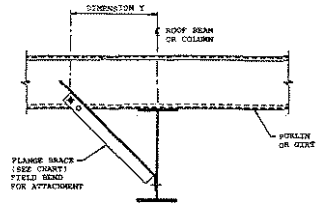
FLANGE BRACE SCHEDULE					
♡	PART NO. FRONT/LEFT	PART NO. REAR/RIGHT	DIM. "Y"	DETAIL	FIELD WORK ▲
201	545100		10 1/2"	C347	

REVISION NO. 1	REVISION NO. 2								
DATE:	DATE:	BUTLER MANUFACTURING COMPANY GENERAL OFFICES-KANSAS CITY, MISSOURI	PRODUCT OF THE PRO/ID® ORDER ENGINEERING SYSTEM	BUILDER:	PROJECT:	BUILDING ORDER DESCRIPTION:	DRAWING TITLE:	DRN: DEPTEDMAR	ENG:
DRAWN BY:	DRAWN BY:			S M ANDERSEN CO., INC. PORTLAND, OR	MCCORMICK AND BAXTER PORTLAND, OREGAN	25X40X10 LRF 25# ROOF SL + 5#CLL 100 MPH EXP C IBC 03 SEISMIC DESIGN CAT D	CROSS SECTION ERECTION DRAWING	CHK:	DATE: 03/31/05
CHECKED BY:	CHECKED BY:							DRAWING NUMBER: D05-127470-02A	REV. 00

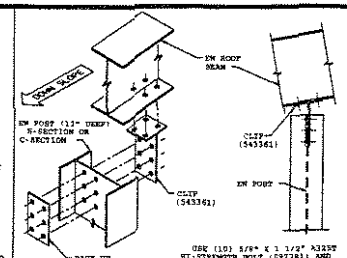


FRAME DESIGN INFORMATION

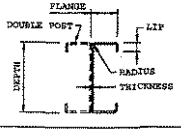
PART	DESCRIPTION
V37473 152-0 EW ROOF BEAM	TOP FLANGE = 5" X .250"
	BOTTOM FLANGE = 5" X .250"
	WEB THICKNESS = .120"
	PART DEPTH = 12"
V37480 100-4 EXTERIOR COLUMN	TOP FLANGE = 5" X .250"
	BOTTOM FLANGE = 5" X .250"
	WEB THICKNESS = .120"
	PART DEPTH = 8" TO 12"
V37482 152-0 ROOF BEAM	TOP FLANGE = 5" X .250"
	BOTTOM FLANGE = 5" X .250"
	WEB THICKNESS = .140"
	PART DEPTH = 12"
V37488 098-5 EW CORNER POST	TOP FLANGE = 5" X .250"
	BOTTOM FLANGE = 5" X .250"
	WEB THICKNESS = .120"
	PART DEPTH = 12"
V37489 152-0 EW ROOF BEAM	TOP FLANGE = 5" X .250"
	BOTTOM FLANGE = 5" X .250"
	WEB THICKNESS = .120"
	PART DEPTH = 12"



DETAIL C347 — SINGLE FLANGE BRACE CONNECTION
USE SECOND HOLE AT PURLIN OR GIRT CONNECTION



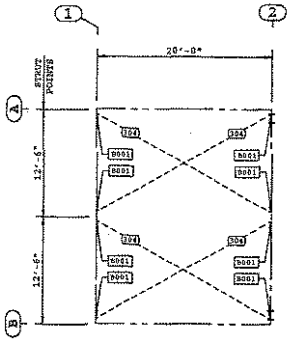
DETAIL E142 — ENDWALL POST TOP CONNECTION
WIDE FLANGE FRAME, TRAVE LOAD - 12" POST



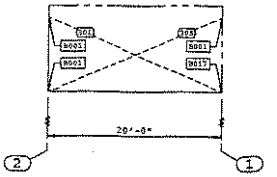
C - SECTION DESIGN INFORMATION

PART	DEPTH	FLANGE	LIP	THICKNESS	RADIUS
12" SCL ENDWALL PO 500815	1'-0"	3 1/2"	1 1/2"	.090"	9/32"

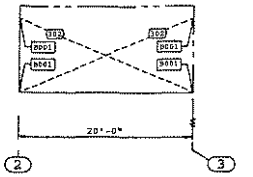
REVISION NO. 1	REVISION NO. 2	BUTLER MANUFACTURING COMPANY	PRODUCT OF THE PROVO® ORDER ENGINEERING SYSTEM	BUILDER:	PROJECT:	BUILDING ORDER DESCRIPTION:	DRAWING TITLE:	DRN: BEPTERNAR	ENG:
DATE:	DATE:	GENERAL OFFICES-KANSAS CITY, MISSOURI		S M ANDERSEN CO., INC. PORTLAND, OR	MCCORMICK AND BAXTER PORTLAND, OREGAN	25X40X10 LRF 25# ROOF SL + 5#CLL 100 MPH EXP C IBC 03 SEISMIC DESIGN CAT D	CROSS SECTION ERECTION DRAWING DETAIL SHEET	CHK:	DATE: 03/31/05
DRAWN BY:	DRAWN BY:							DRAWING NUMBER: D05-127470-02B	REV. 00
CHECKED BY:	CHECKED BY:								



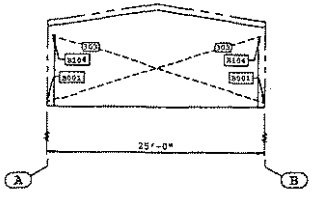
ROOF BRACING



SIDEWALL BRACING
AT GRID A



SIDEWALL BRACING
AT GRID B



ENDWALL BRACING
AT GRID 1

BRACE ROD SCHEDULE

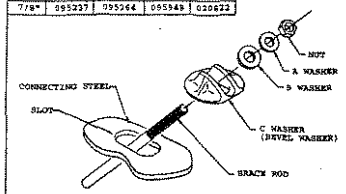
	PART NUMBER	DESCRIPTION	THREAD	TURNBUCKLE
301	544048 -244	5/8 RH-RH BR ROD	RH-RH	NONE
302	544047 -260	1/2 RH-RH BR ROD	RH-RH	NONE
303	544047 -296	1/2 RH-RH BR ROD	RH-RH	NONE
304	544047 -280	1/2 RH-RH BR ROD	RH-RH	NONE
305	544048 -260	5/8 RH-RH BR ROD	RH-RH	NONE

STANDARD NOTES:

WBG008 BLACK THREAD PROTECTORS INDICATE 1/2" BRACE RODS
RED THREAD PROTECTORS INDICATE 5/8" BRACE RODS
YELLOW THREAD PROTECTORS INDICATE 3/4" BRACE RODS
ORANGE THREAD PROTECTORS INDICATE 7/8" BRACE RODS
GREEN THREAD PROTECTORS INDICATE 1" BRACE RODS
WHITE THREAD PROTECTORS INDICATE 1 1/8" BRACE RODS

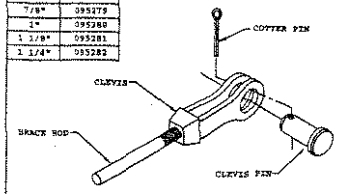
REVISION NO. 1	REVISION NO. 2			BUILDER:	PROJECT:	BUILDING ORDER DESCRIPTION:	DRAWING TITLE:	DRW: REPTKHAR	ENG:
DATE:	DATE:	BUTLER MANUFACTURING COMPANY GENERAL OFFICES-KANSAS CITY, MISSOURI	PRODUCT OF THE PRO/ENGINEER® ORDER ENGINEERING SYSTEM	S M ANDERSEN CO., INC. PORTLAND, OR	MCCORMICK AND BAXTER PORTLAND, OREGAN	25X40X10 LRF 25# ROOF SL + 5#CLL 100 MPH EXP C IBC 03 SEISMIC DESIGN CAT D	WIND BRACING DRAWING	CHK:	DATE: 03/31/05
DRAWN BY:	DRAWN BY:							DRAWING NUMBER: D05-127470-03	REV. 00
CHECKED BY:	CHECKED BY:								

ROD DIA.	NUT	WASHERS		
		A	B	C
1/2"	095032	095133	095165	020821
5/8"	095231	095298	095165	020821
3/4"	095235	095864	095948	020822
7/8"	095237	095564	095949	020823



DETAIL B001 — TYPICAL BEVEL WASHER CONN.

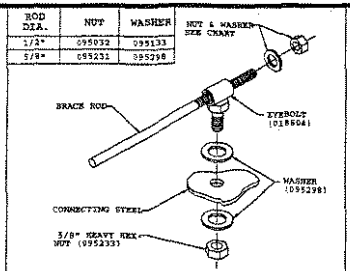
ROD DIA.	CLEVIS ASSY.
5/8"	095277
3/4"	095278
7/8"	095279
1"	095280
1 1/8"	095281
1 1/4"	095282



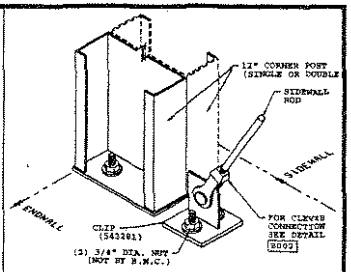
DETAIL B002 — TYPICAL CLEVIS CONNECTION

ROD DIA.	NUT	WASHER
1/2"	095032	095133
5/8"	095231	095298

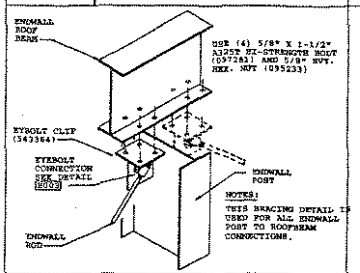
NUT & WASHER SEE CHART



DETAIL B003 — TYPICAL EYEBOLT CONNECTION



DETAIL B017 — CLEVIS CONNECTION AT FLOOR
END BAY BRACING AT CORNER POST



DETAIL B104 — BRACED EYEBOLT CONNECTION TO ENDWALL ROOF BEAM

REVISION NO. 1	REVISION NO. 2							
DATE:	DATE:	BUTLER MANUFACTURING COMPANY GENERAL OFFICES-KANSAS CITY, MISSOURI	PRODUCT OF THE PROVO® ORDER ENGINEERING SYSTEM	BUILDER: S M ANDERSEN CO., INC. PORTLAND, OR	PROJECT: MCCORMICK AND BAXTER PORTLAND, OREGAN	BUILDING ORDER DESCRIPTION: 25X40X10 LRF 25# ROOF SL + 5#CLL 100 MPH EXP C IBC 03 SEISMIC DESIGN CAT D	DRAWING TITLE: WIND BRACING DETAIL SHEET	DWN: BEPTEMHAR CHK: ENG: DATE: 03/31/05 DRAWING NUMBER: D05-127470-03A REV. 00
DRAWN BY:	DRAWN BY:							
CHECKED BY:	CHECKED BY:							

TRANSMITTAL OF SHOP DRAWINGS, EQUIPMENT DATA, MATERIAL SAMPLES, OR MANUFACTURER'S CERTIFICATES OF COMPLIANCE (Read instructions on reverse side prior to initiating this form)	DATE	TRANSMITTALL NO.
	3/30/2005	2

SECTION I - REQUEST FOR APPROVAL OF THE FOLLOWING ITEMS (This section will be initiated by the contractor)

TO:	FROM:	CONTRACT NO.	CHECK ONE:
Ecology & Environment 2101 Fourth Ave. Ste.1900 Seattle,WA. Attn: Alexander Whitman	Wilder Construction Company 6645 NE 78th Ct. SteC-10 Portland,OR.97218 (503)255-1444	Mac& Baxter Support	[X] THIS IS A NEW TRANSMITTAL [ ] THIS IS A RESUBMITTAL OF TRANSMITTAL _____
SPECIFICATION SEC. NO. (Cover only one section with each transmittal) Drawings	PROJECT TITLE AND LOCATION **McCOrmick & Baxter Support Facility Modifications**		CHECK ONE: THIS TRANSMITTAL IS FOR [ ] FIO [X] E&E approval

ITEM NO. a.	DESCRIPTION OF ITEM SUBMITTED (Type size, model numbers / etc.) b.	MFG OR CONTR. CAT., CURVE DRAWING OR BROCHURE NO. (See instruction no. 8) c.	NO. OF COPIES d.	CONTRACT REFERENCE DOCUMENT		FOR CONTRACTOR USE CODE g.	VARIATION (See instructions No.6) h.	FOR CE USE CODE i.
				SPEC. PARA NO. e.	DRAWING SHEET NO. f.			
1	Sump Grate & Frame	Cat.	1					
2	Haz Waste Trench Grate/Frame	Cat.	1					
3	Wheel Wash Grate/Frame	Cat.	1					

REMARKS

I certify that the above submitted items have been reviewed in detail and are correct and in strict conformance with the contract drawings and specifications except as other wise stated

Michael Fay 3/30/05
NAME AND SIGNATURE OF CONTRACTOR

SECTION II - APPROVAL ACTION

ENCLOSURES RETURNED (List by Item No.)	NAME, TITLE AND SIGNATURE OF APROVAING AUTHORITY	DATE

1 FRAME WITH TWO GRATES

EAST JORDAN
IRON WORKS, INC.
P.O. BOX 439
EAST JORDAN, MI. 49727
1-800-874-4100
FAX 231-536-4458

DRAWN	DATE
TCL	04/12/02
APPROVED	DATE

SQUARE MANHOLE FRAME

PRODUCT NO.
00831510

CATALOG NO.
8315Z

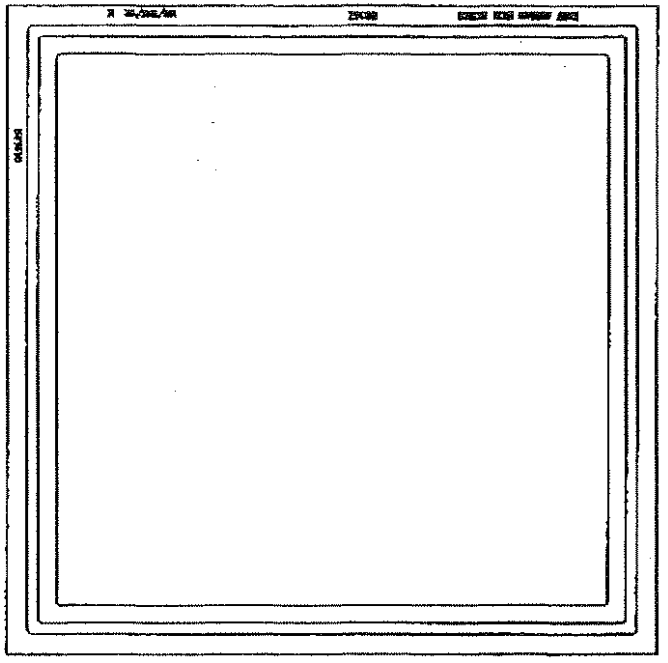
REF. PRODUCT DRAWING
831510

EST. WT.
FRAME: 180 LBS 82kg

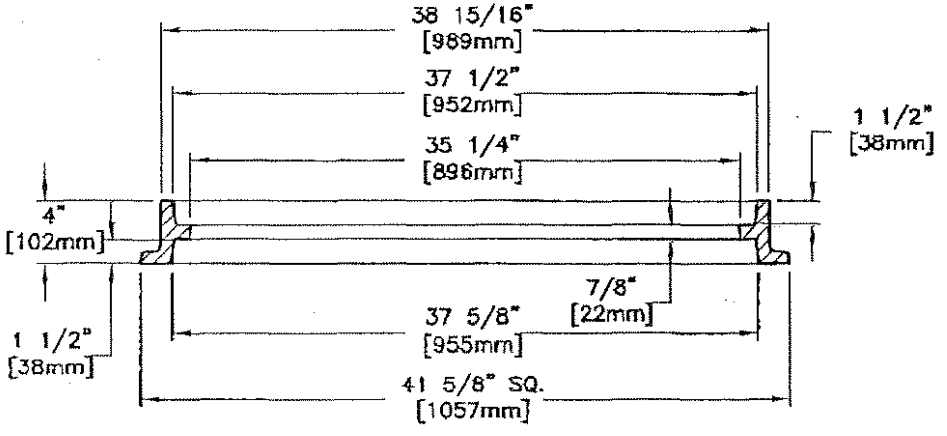
OPEN AREA
N/A

MAT'L SPEC.
FRAME - GRAY IRON
ASTM A48 CL35

LOAD RATING
HEAVY DUTY



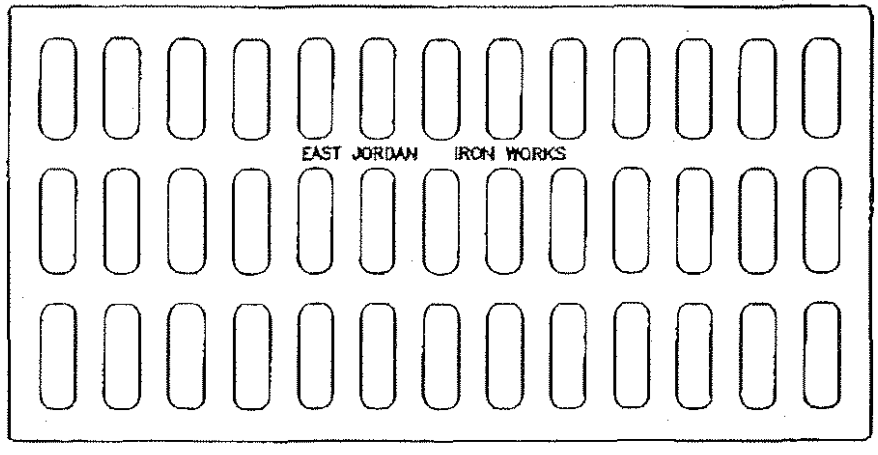
PLAN VIEW

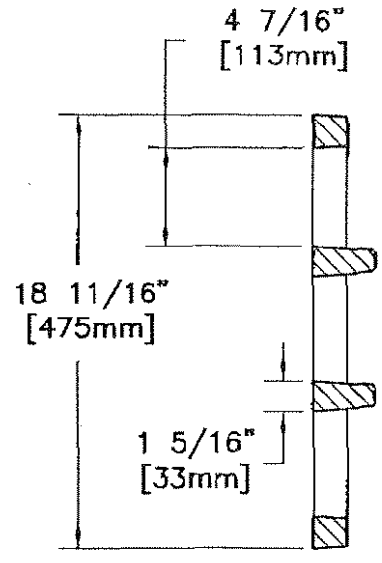


SECTION VIEW

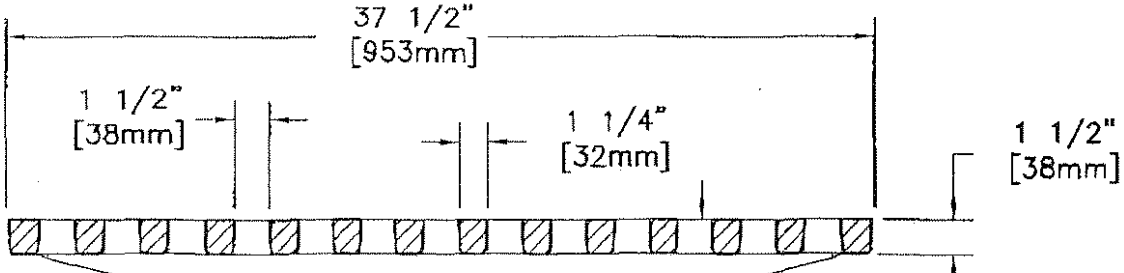
NOTE: THIS FRAME IS REVERSIBLE AND CAN BE INSTALLED AS A BOTTOM FLANGE UNIT.

2 GRATES FOR 35¼ SQ





SECTION



SECTION

EAST JORDAN
IRON WORKS, INC.
P.O. BOX 439
EAST JORDAN, MI. 49727
1-800-874-4100
FAX 231-536-4458

DRAWN	DATE
DEW	05/30/03
APPROVED	DATE

CATCH BASIN GRATE

PRODUCT NO.
831530

CATALOG NO.
8315M

REF. PRODUCT DRAWING
831530

EST. WT.
GRATE: 170 LBS 77kg

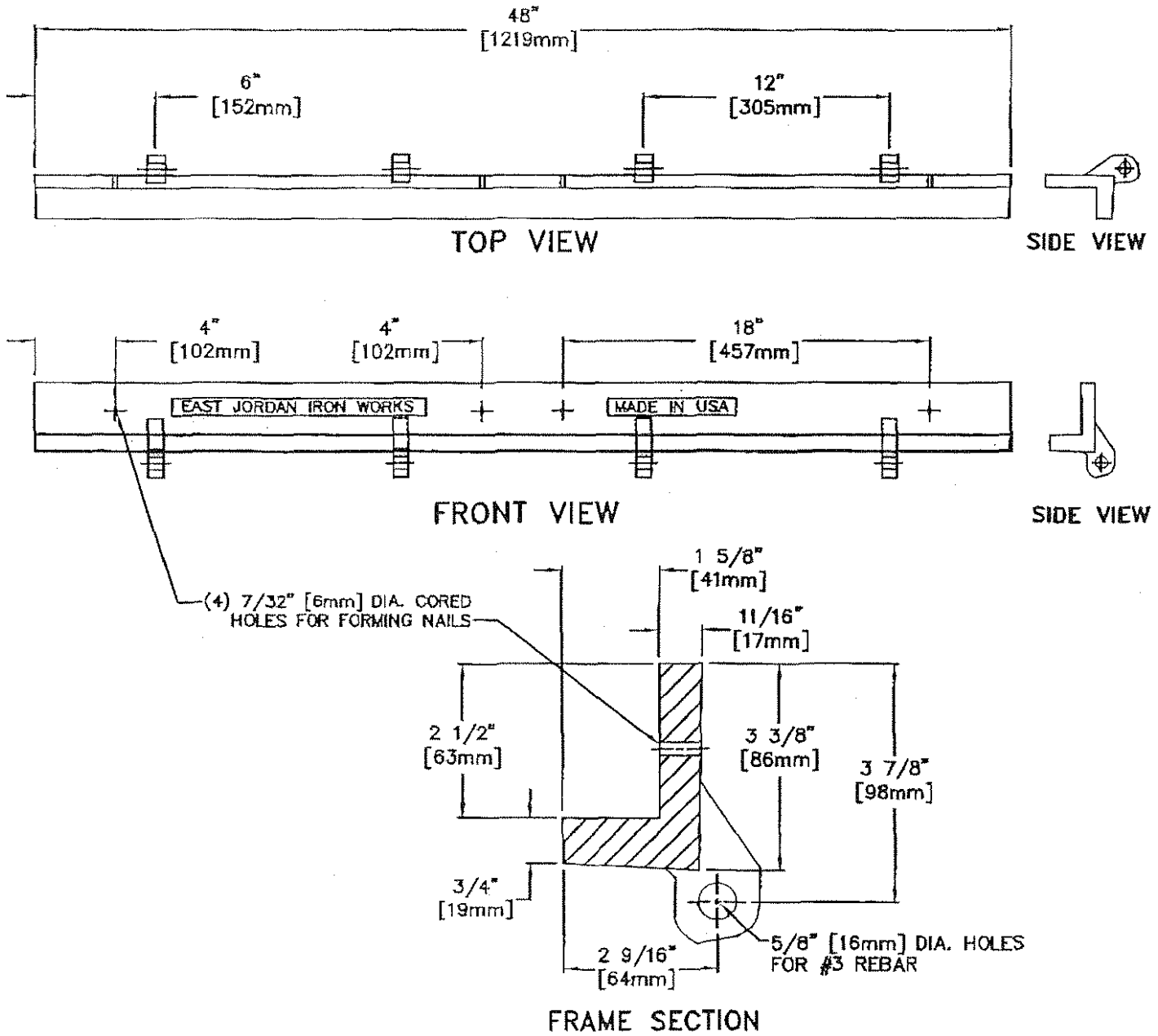
OPEN AREA
250 SQ. INCHES
1613 SQ.CM

MAT'L SPEC.
GRATE – GRAY IRON
ASTM A48 CL35

LOAD RATING
HEAVY DUTY

0

4 ITEMS



EAST JORDAN
IRON WORKS, INC.
P.O. BOX 439
EAST JORDAN, MI. 49727
1-800-874-4100
FAX 231-536-4458

DRAWN	DATE
DAL	9/09/02
APPROVED	DATE

48" TRENCH FRAME

PRODUCT NO.
47300311
UNDIPPED

CATALOG NO.
V-7300-3

REF. PRODUCT DRAWING
N/A

EST. WT.
FRAME: 46LBS 21kg

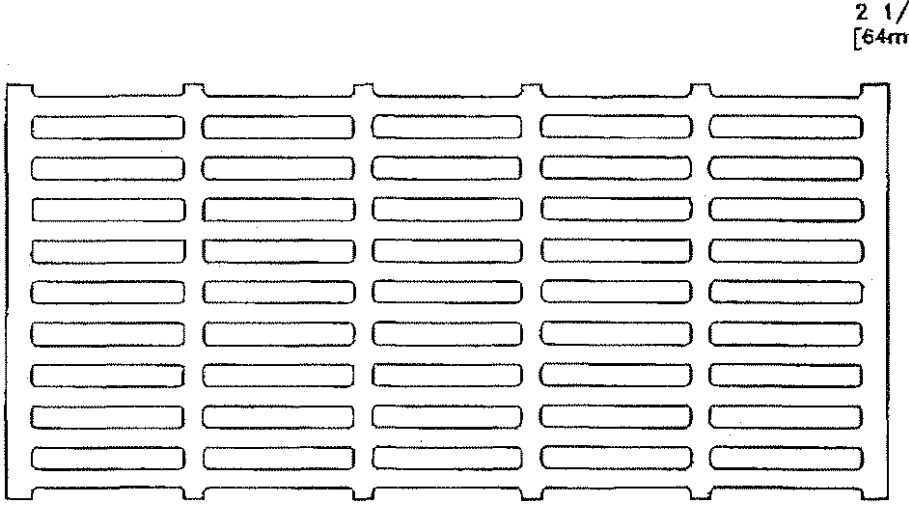
OPEN AREA
N/A

MAT'L SPEC.
FRAME – GRAY IRON
ASTM A48 CL35B

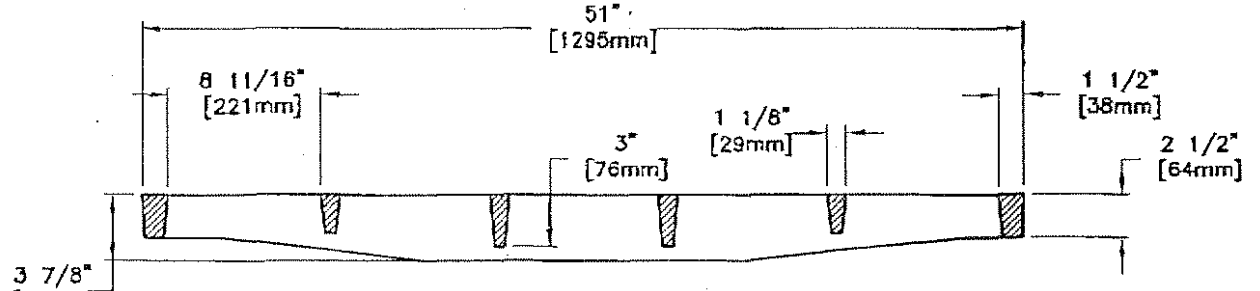
LOAD RATING
HEAVY DUTY

In Stock

8 ITEMS.



GRATE SECTION



GRATE SECTION

EAST JORDAN
IRON WORKS, INC.
P.O. BOX 439
EAST JORDAN, MI. 49727
1-800-874-4100
FAX 231-536-4458

DRAWN	DATE
SBB	10/05/01
APPROVED	DATE

V-7314 GRATE

PRODUCT NO.
47314030

CATALOG NO.
V-7314 GR

REF. PRODUCT DRAWING
NA

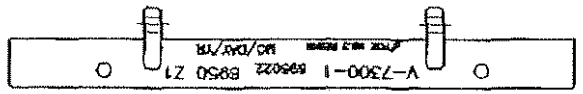
EST. WT.
GRATE: 480 LBS 218kg
240 LBS 109kg PER FT.

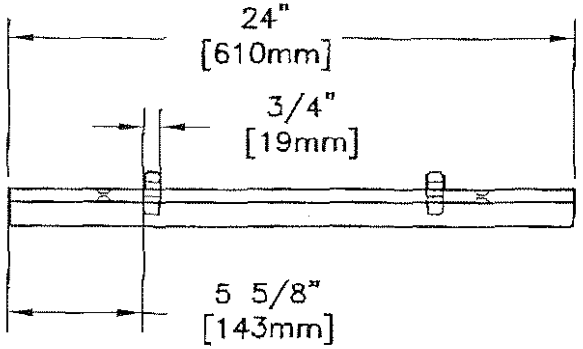
OPEN AREA
550 sq. in.
[3548 sq. cm]

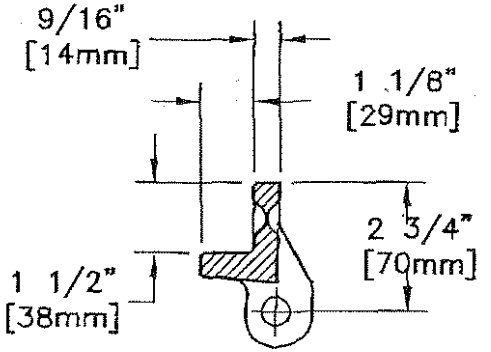
MAT'L SPEC.
GRATE - GRAY IRON
ASTM A48 CL30

LOAD RATING
HEAVY DUTY

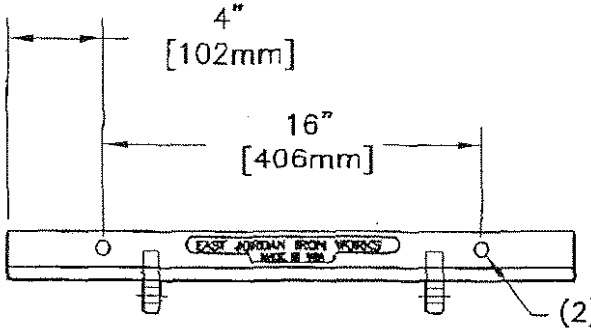
8 Frames







TYP SECTION



(2) DIMPLES FOR FORMING NAILS

EAST JORDAN
IRON WORKS, INC.
P.O. BOX 439
EAST JORDAN, MI. 49727
1-800-874-4100
FAX 231-536-4458

DRAWN	DATE
SBB	03/11/02
APPROVED	DATE

TRENCH FRAME

PRODUCT NO.
695022

CATALOG NO.
6950Z1

REF. PRODUCT DRAWING
695020

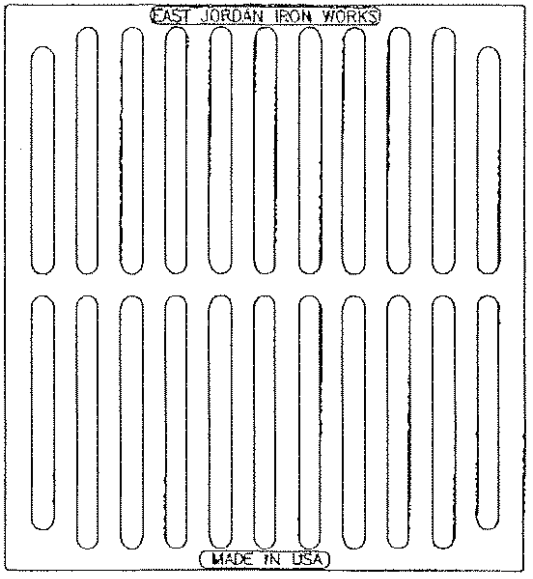
EST. WT.
FRAME: 10 LBS 5 kg

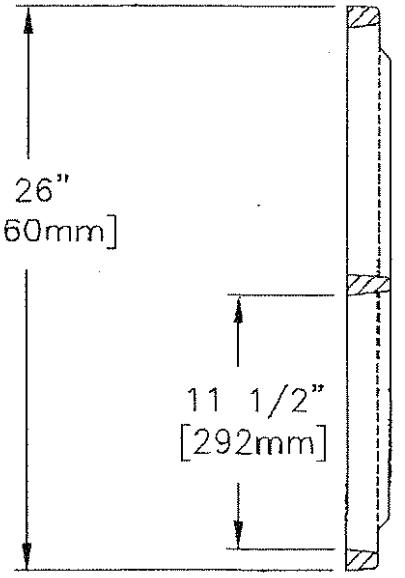
OPEN AREA
N/A

MAT'L SPEC.
FRAME – GRAY IRON
ASTM A48 CL35

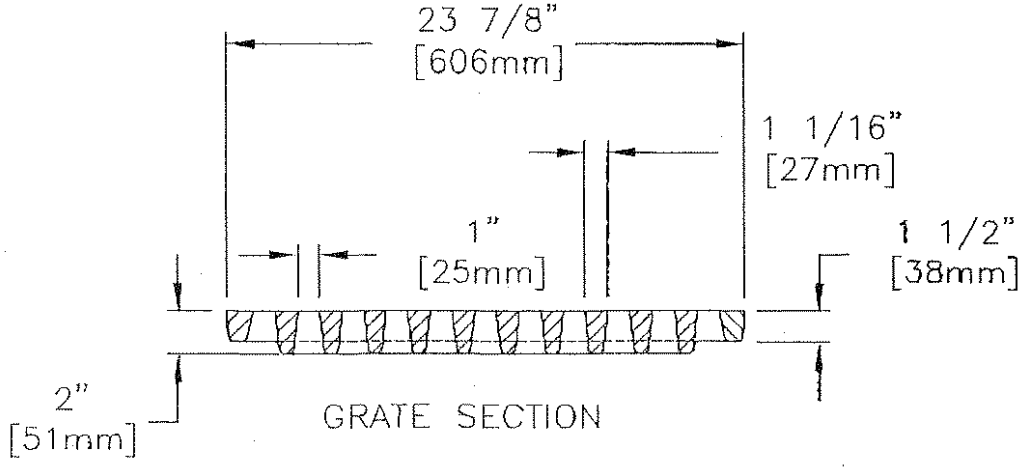
LOAD RATING
HEAVY DUTY

4 Grates





GRATE SECTION



GRATE SECTION

EAST JORDAN
IRON WORKS, INC.
P.O. BOX 439
EAST JORDAN, MI. 49727
1-800-874-4100
FAX 231-536-4458

DRAWN	DATE
SBB	06/03/04
APPROVED	DATE

6958M2DI FLAT GRATE

PRODUCT NO.
695840 DIPPED

CATALOG NO.
6958M2DI

REF. PRODUCT DRAWING
695841

EST. WT.
GRATE: 150 LBS 68kg

OPEN AREA
245 SQ. IN. (1580 SQ. cm.)

MAT'L SPEC.
GRATE – DUCTILE IRON
ASTM A536

LOAD RATING
HEAVY DUTY

TRANSMITTAL OF SHOP DRAWINGS, EQUIPMENT DATA, MATERIAL SAMPLES, OR MANUFACTURER'S CERTIFICATES OF COMPLIANCE (Read instructions on reverse side prior to initiating this form)	DATE	TRANSMITTALL NO.
	3/29/2005	1

SECTION I - REQUEST FOR APPROVAL OF THE FOLLOWING ITEMS (This section will be initiated by the contractor)

TO:	FROM:	CONTRACT NO.	CHECK ONE:
Ecology & Environment **2101 Fourth Ave.** **Seattle,WA.98121** Alexander Whitman	**Wilder Construction Company** **6645 NE 78th Ct. SteC-10** **Portland,OR.97218** **(503)255-1444**	Mac& Bac Support	[X] THIS IS A NEW TRANSMITTAL [ ] THIS IS A RESUBMITTAL OF TRANSMITTAL _____

SPECIFICATION SEC. NO. (Cover only one section with each transmittal)	PROJECT TITLE AND LOCATION	CHECK ONE: THIS TRANSMITTAL IS
2520	**McCOrmick & Baxter Support Facility Modifications**	FOR [ ] FIO [X] E&E approval

ITEM NO. a.	DESCRIPTION OF ITEM SUBMITTED (Type size, model numbers / etc.) Ductile Pipe,Fire Hydrant/Fittings b.	MFG OR CONTR. CAT., CURVE DRAWING OR BROCHURE NO. (See instruction no. 8) c.	NO. OF COPIES d.	CONTRACT REFERENCE DOCUMENT SPEC. PARA NO. e.	CONTRACT REFERENCE DOCUMENT DRAWING SHEET NO. f.	FOR CONTRACTOR USE CODE g.	VARIATION (See instructions No.6) h.	FOR CE USE CODE i.
1	Ductile Pipe/Fittings	Cat.	1	All				
2	Fire Hydrant/Associated Fittings	Cat	1	All				

REMARKS

I certify that the above submitted items have been reviewed in detail and are correct and in strict conformance with the contract drawings and specifications except as other wise stated

Michael Fey

NAME AND SIGNATURE OF CONTRACTOR

SECTION II - APPROVAL ACTION

ENCLOSURES RETURNED (List by Item No.)	NAME, TITLE AND SIGNATURE OF APROVAING AUTHORITY	DATE

EXCEL VERSION OF ENG FORM 4025-R, 14 JUNE 2001

Filename - Submittal Form

U.S. PIPE TYTON JOINT® Pipe

TYTON JOINT® is U.S. Pipe's trademark for pipe with a push-on type connection. Simplicity, sturdiness and water-tightness of the system were brought about, not by chance but by design. Taking advantage of a background of 100 years experience with pipe and pipe connecting systems, U.S. Pipe made a thorough study of existing joining systems and requirements of pipe users. The results of this study showed the need for a simple, economical and reliable method of assembling pipe. With the objective of developing such a system, a number of new designs were devised. Several of the most promising were tested and the assembly which possessed the most outstandingly desirable characteristics became TYTON JOINT Pipe.

After selection of the system, TYTON JOINT Pipe were subjected to further rigid tests designed to simulate extreme installation and service conditions which might be encountered in the field. It was only after these tests proved completely satisfactory and were confirmed by field installations that the decision was made to market TYTON JOINT Pipe in 1955. Convincing proof of its wide acceptance is shown by the fact that more than 95% of the pipe now sold by this company is TYTON JOINT Pipe.

The TYTON® Gasket–a circular rubber gasket which has a modified bulb shape in cross section–is the only accessory. Composition and dimensions of the gasket have been carefully engineered to ensure a water-tight and lasting seal. Gaskets of special elastomers may be ordered for special applications.

The gasket contour and bell socket contour ensure that the gasket will remain seated during proper assembly of the pipe.

The plain end of the pipe is furnished beveled to ease assembly. Because TYTON JOINT Pipe assembles so easily, those not experienced with it may get the impression that the system is not water-tight. But years of successful experience prove it to be water-tight regardless of ease of assembly. Hydrostatic tests have shown that the system will withstand pressures far in excess of rated pressures.

Ductile Iron TYTON JOINT Pipe are centrifugally cast in metal molds in accordance with ANSI/AWWA C151/A21.51.

TYTON Gaskets are furnished in accordance with ANSI/AWWA C111/A21.11 *"Rubber-Gasket Joints for Ductile-Iron Pressure Pipe and Fittings."*

Asphaltic outside coating and inside lining and coating are in accordance with ANSI/AWWA C151/A21.51 *"Ductile-Iron Pipe, Centrifugally Cast for Water"* for pipe and ANSI/AWWA C110/A21.10 *"Ductile-Iron and Gray-Iron Fittings, 3 In. Through 48 In., For Water and Other Liquids."* Cement lining, in accordance with ANSI/AWWA C104/A21.4 *"Cement-Mortar Lining for Ductile-Iron Pipe and Fittings for Water"* or special linings and/or coatings can be furnished for specific conditions.

Sizes 4" through 42" are furnished in nominal 18-foot laying lengths. 48" through 64" are furnished in 20-foot laying lengths.

As specified in ANSI/AWWA C151/A21.51, pipe weights have been calculated using standard barrel weights and weights of bells being produced.

When joint restraint is required for push-on joint pipe, two options are available from U.S. Pipe. For joint restraint of 4" through 24", FIELD LOK® Gaskets may be used. FIELD LOK Gaskets are rated for 350 psi in sizes 4" through 12" and 250 psi in sizes 14" through 24". In addition, for 4" through 64" sizes, TR FLEX® Pipe and Fittings may be used. TR FLEX Pipe and Fittings are rated for working pressures of 350 psi in 4" through 24" sizes, 250 psi in sizes 36" through 48" and 150 psi in sizes 54" through 64". For higher pressure applications see your U.S. Pipe representative. Product brochures on both FIELD LOK Gaskets and TR FLEX Pipe and Fittings are available from your U.S. Pipe representative.

When TYTON JOINT Pipe are used for bridge crossings or other above ground installations, each length of pipe must be supported in a manner to restrict both vertical and horizontal movement.

Note.
If specifiers and users believe that corrosive soils will be encountered where our products are to be installed, please refer to ANSI/AWWA C105/A21.5 *"Polyethylene Encasement for Ductile Iron Pipe Systems"*, for proper external protection procedures.

U.S. Pipe qualifies for Federal Procurement under Public Law No. 94-580, Section 6002, known as the Resource Recovery Act of 1976, since, due to modern technology, recycled iron and steel scrap is used to a large degree in our Ductile Iron Pipe production.

Thicknesses, Dimensions and Weights of Ductile Iron TYTON JOINT® Pipe

Thicknesses and dimensions of 4" through 64" Ductile Iron pipe conform to ANSI/AWWA C151/A21.51. Weights may vary from the standard because of differences in bell weights.

Size Inches	Thickness Class	Thickness	Outside Diameter*	18-Foot Laying Length	
				Weight Per Length†	Avg. Weight Per Foot††
		Inches		Pounds	
4	51	0.26	4.80	215	11.9
4	52	0.29	4.80	235	13.1
4	53	0.32	4.80	260	14.4
4	54	0.35	4.80	280	15.6
4	55	0.38	4.80	300	16.7
4	56	0.41	4.80	320	17.8
6	50	0.25	6.90	305	16.9
6	51	0.28	6.90	335	18.6
6	52	0.31	6.90	370	20.6
6	53	0.34	6.90	400	22.2
6	54	0.37	6.90	435	24.2
6	55	0.40	6.90	465	25.8
6	56	0.43	6.90	495	27.5
8	50	0.27	9.05	430	23.9
8	51	0.30	9.05	475	26.4
8	52	0.33	9.05	520	28.9
8	53	0.36	9.05	560	31.1
8	54	0.39	9.05	605	33.6
8	55	0.42	9.05	650	36.1
8	56	0.45	9.05	690	38.3
10	50	0.29	11.10	570	31.7
10	51	0.32	11.10	625	34.7
10	52	0.35	11.10	680	37.8
10	53	0.38	11.10	730	40.6
10	54	0.41	11.10	785	43.6
10	55	0.44	11.10	840	46.7
10	56	0.47	11.10	890	49.4
12	50	0.31	13.20	725	40.3
12	51	0.34	13.20	790	43.9
12	52	0.37	13.20	855	47.5
12	53	0.40	13.20	920	51.1
12	54	0.43	13.20	985	54.7
12	55	0.46	13.20	1045	58.1
12	56	0.49	13.20	1110	61.7

* Tolerance of O.D. of spigot end: 4-12 in., ±0.06 in.; 14-24 in., +0.05 in., −0.08 in.; 30-48 in., +0.08 in., -0.06 in.; 54-64 in., +0.04 in., -0.10 in.

† Including bell; calculated weight of pipe rounded off to nearest 5 lbs.

†† Including bell; average weight, per foot, based on calculated weight of pipe before rounding.

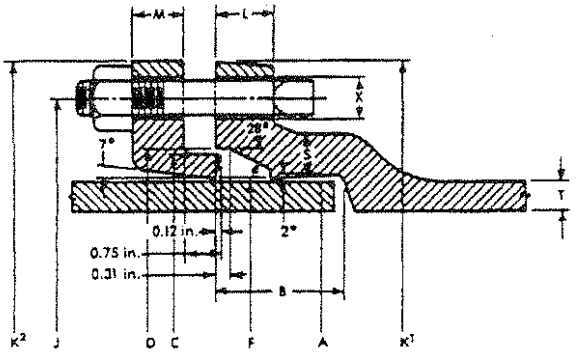
Tyler/Union

MECHANICAL JOINT C153 DUCTILE IRON COMPACT FITTINGS

Sizes 3" thru 12" UL Listed For Fire Main Equipment

SAMPLE SPECIFICATIONS

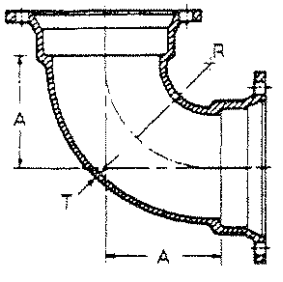
3" THRU 24" MECHANICAL JOINT DUCTILE IRON FITTINGS shall be produced in the USA in accordance with all applicable terms and provisions of ANSI/AWWA C153/A21.53 and ANSI/AWWA C111/A21.11. **NOTE:** Fittings are cement-lined and seal-coated in accordance with ANSI/AWWA C104/A21.4; also available double cement-lined or bare. See list price sheet for details.

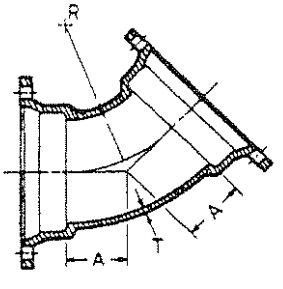


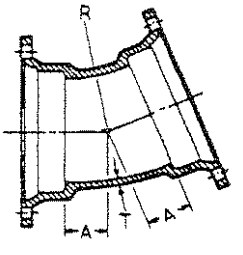
JOINT DIMENSIONS IN INCHES

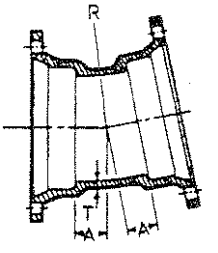
Size	A Dia.	B	C Dia.	D Dia.	F Dia.	J Dia.	K¹ Dia.	K² Dia.	L	M	S	T	X Dia.	BOLTS Size	No.
3	3.96	2.50	4.84	4.94	4.06	6.19	7.62	7.69	.58	.62	.39	.33	3/4	5/8x3	4
4	**4.80**	**2.50**	**5.92**	**6.02**	**4.90**	**7.50**	**9.06**	**9.12**	**.60**	**.75**	**.39**	**.34**	7/8	3/4x3 1/2	4
6	6.90	2.50	8.02	8.12	7.00	9.50	11.06	11.12	.63	.88	.43	.36	7/8	3/4x3 1/2	6
8	**9.05**	**2.50**	**10.17**	**10.27**	**9.15**	**11.75**	**12.31**	**13.37**	**.66**	**1.00**	**.45**	**.38**	7/8	3/4x3 1/2	6
10	11.10	2.50	12.22	12.34	11.20	14.00	15.62	15.62	.70	1.00	.47	.40	7/8	3/4x3 1/2	8
12	**13.20**	**2.50**	**14.32**	**14.44**	**13.30**	**16.25**	**17.88**	**17.88**	**.73**	**1.00**	**.49**	**.42**	7/8	3/4x3 1/2	8
14	15.30	3.50	16.40	16.54	15.44	18.75	20.31	20.25	.79	1.25	.56	.47	7/8	3/4x4	10
16	**17.40**	**3.50**	**18.50**	**18.64**	**17.54**	**21.00**	**22.56**	**22.50**	**.85**	**1.31**	**.57**	**.50**	7/8	3/4x4	12
18	19.50	3.50	20.60	20.74	19.64	23.25	24.83	24.75	1.00	1.38	.68	.54	7/8	3/4x4	12
20	**21.60**	**3.50**	**22.70**	**22.84**	**21.74**	**25.50**	**27.08**	**27.08**	**1.02**	**1.44**	**.69**	**.57**	7/8	3/4x4	14
24	25.80	3.50	26.90	27.04	25.94	30.00	31.58	31.50	1.02	1.56	.75	.61	7/8	3/4x4 1/2	16

BENDS









90° Bends (1/4)

Size	Dimensions T	A	R	Weight
3	.34	4.5	4.0	20
4	**.35**	**5.0**	**4.5**	**26**
6	.37	6.5	6.0	48
8	**.39**	**7.5**	**7.0**	**68**
10	.41	9.5	9.0	136
12	**.43**	**10.5**	**10.0**	**141**
14	.51	12.0	11.5	220
16	**.52**	**13.0**	**12.5**	**264**
18	.59	15.5	14.0	410
20	**.60**	**17.0**	**15.5**	**505**
24	.62	20.0	18.5	695

45° Bends (1/8)

Size	Dimensions A	R	Weight
3	2.00	3.62	16
4	**2.49**	**4.81**	**22**
6	3.50	7.25	40
8	**4.00**	**8.44**	**59**
10	5.01	10.88	86
12	**5.98**	**13.25**	**109**
14	5.50	12.06	164
16	**5.98**	**13.25**	**202**
18	7.50	14.50	325
20	**8.00**	**16.88**	**368**
24	9.00	18.12	481

22 1/2° Bends (1/16)

Size	Dimensions A	R	Weight
3	1.50	4.98	15
4	**1.82**	**6.66**	**21**
6	2.59	10.50	37
8	**2.85**	**11.80**	**51**
10	3.35	14.35	67
12	**3.86**	**16.90**	**90**
14	3.93	17.25	148
16	**3.98**	**17.50**	**179**
18	7.50	30.19	292
20	**8.50**	**35.19**	**364**
24	9.00	37.69	481

11 1/4° (1/32)

Size	Dimensions A	R	Weight
3	1.25	7.62	15
4	**1.55**	**10.70**	**20**
6	1.81	13.26	33
8	**2.06**	**15.80**	**48**
10	2.32	18.36	61
12	**2.56**	**20.90**	**79**
14	2.59	21.25	133
16	**2.62**	**21.50**	**159**
18	7.50	60.94	320
20	**8.50**	**71.07**	**346**
24	9.00	76.12	457

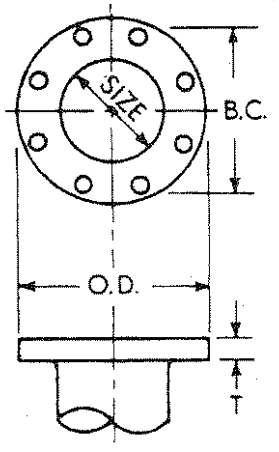
Tyler Pipe/Utilities Division • P.O. Box 2027 • Tyler, Texas 75710 • (903) 882-5511
Union Foundry Company • P.O. Box 309 • Anniston, Alabama 36202 • (205) 236-7601

5-24-99

DUCTILE IRON C110 FLANGED FITTINGS

SAMPLE SPECIFICATION

Flanged Fittings, 2" through 30" shall be manufactured in the USA of Ductile Iron in accordance with all applicable terms and provisions of standards ANSI/AWWA C110/A21.10 (current revisions). All Ductile Iron Flanged Fittings shall be rated for water pressure of 250 PSI. **Note:** Fittings are cement-lined and sealcoated in accordance with ANSI/AWWA C104/A21.4

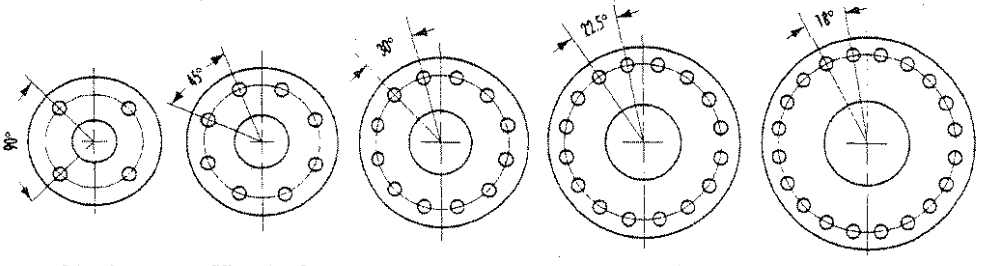


Note: No flange joint material furnished.

FLANGE DETAILS

Nominal Pipe Size Inch	Flange O.D.	Dia. of Bolt Circle	Flange Thickness T	Bolt Hole Diameter	Number of Bolts	Bolt Dia. and Lengths
2	6	4.75	.62	.75	4	$^{5}/_{8}$ x $2^{1}/_{4}$
3	**7.5**	**6**	**.75**	**.75**	**4**	$^{5}/_{8}$ x $2^{1}/_{2}$
4	9	7.5	.94	.75	8	$^{5}/_{8}$ x 3
6	**11**	**9.5**	**1.00**	**.875**	**8**	$^{3}/_{4}$ x $3^{1}/_{2}$
8	13.5	11.75	1.12	.875	8	$^{3}/_{4}$ x $3^{1}/_{2}$
10	**16**	**14.25**	**1.19**	**1.00**	**12**	$^{7}/_{8}$ x 4
12	19	17	1.25	1.00	12	$^{7}/_{8}$ x 4
14	**21**	**18.75**	**1.38**	**1.125**	**12**	1 x $4^{1}/_{2}$
16	23.5	21.25	1.44	1.125	16	1 x $4^{1}/_{2}$
18	**25**	**22.75**	**1.56**	**1.25**	**16**	$1^{1}/_{8}$ x 5
20	27.5	25	1.69	1.25	20	$1^{1}/_{8}$ x 5
24	**32**	**29.5**	**1.88**	**1.375**	**20**	$1^{1}/_{4}$ x $5^{1}/_{2}$
30	38.75	36	2.12	1.375	28	$1^{1}/_{4}$ x $6^{1}/_{2}$

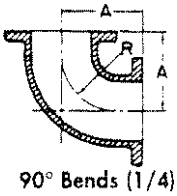
NOTE: Drilling templates are in multiples of four, so that fittings may be made to face in any quarter. Bolt holes shall straddle the center line.



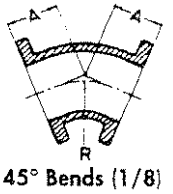
2", 3" **4", 6", 8"** **10", 12", 14"** **16", 18"** **20", 24"**

BENDS

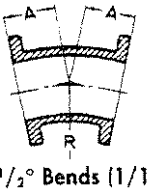
Note: Base Bends are on Page 5 and 6, reducing and long radius 90 bends are on page 5.



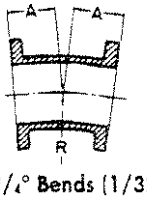
90° Bends (1/4)



45° Bends (1/8)



22 1/2° Bends (1/16)



11 1/4° Bends (1/32)

Size	Dimensions R	A	Weight	Dimensions R	A	Weight	Dimensions R	A	Weight	Dimensions R	A	Weight
2	3.0	4.5	14	...	...	...	...	...	...	...	...	...
3	**4**	**5.5**	**25**	**3.62**	**3**	**20**	**7.56**	**3**	**20**	**15.25**	**3**	**20**
4	4.5	6.5	48	4.81	4	42	10.06	4	40	20.31	4	40
6	**6**	**8**	**74**	**7.25**	**5**	**66**	**15.06**	**5**	**64**	**30.5**	**5**	**55**
8	7	9	118	8.44	5.5	105	17.62	5.5	90	35.5	5.5	90
10	**9**	**11**	**190**	**10.88**	**6.5**	**154**	**22.62**	**6.5**	**130**	**45.69**	**6.5**	**159**
12	10	12	275	13.25	7.5	195	27.67	7.5	231	55.81	7.5	195
14	**11.5**	**14**	**330**	**12.06**	**7.5**	**245**	**25.12**	**7.5**	**250**	**50.75**	**7.5**	**245**
16	12.5	15	430	13.25	8	315	27.62	8	315	55.81	8	315
18	**14**	**16.5**	**530**	**14.5**	**8.5**	**375**	**30.19**	**8.5**	**385**	**60.94**	**8.5**	**385**
20	15.5	18	685	16.88	9.5	595	35.19	9.5	505	71.06	9.5	505
24	**18.5**	**22**	**1085**	**18.12**	**11**	**730**	**37.69**	**11**	**755**	**76.12**	**11**	**760**
30	21.5	25	1755	27.75	15	1335	...	...	1385	116.75	15	1395

"YOUR CONNECTION TO THE FUTURE"

Series 1100 MEGALUG® Mechanical Joint Restraint
SAMPLE SPECIFICATIONS

RESTRAINT INCORPORATED INTO THE DESIGN OF THE FOLLOWER GLAND
- Gland body and restraint components made from minimum ASTM A536, 60-42-10 ductile iron
- Available 3 inch through 48 inch
- Conventional installation procedures per AWWA C-600
- Can be used with the standardized mechanical joint bell conforming to ANSI/AWWA C111 A21.11 and ANSI/AWWA C153/A21.53 of the latest revision
- Capable of full mechanical joint deflection during assembly
- Capable of joint deflection after assembly

MULTIPLE, WEDGE STYLE RESTRAINT MECHANISM
- Proper actuation ensured with torque limiting twist off nuts
- Ductile iron wedges heat treated to range of 370 to 470 BHN

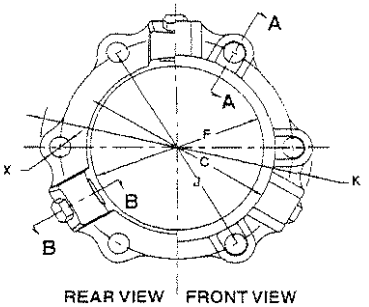
PROOF TESTED
- 3 inch through 16 inch pressure rated at 350 psi, 18 inch through 48 inch rated at 250 psi
- Minimum safety factor of 2 to 1
- Listed by Underwriters Laboratories 3" through the 24" inch size
- Approved by Factory Mutual up through the twelve inch size
- Minimum weights per the following table

SUPPORT PRODUCTS AVAILABLE
- Split repair style available 3 inch through 48 inch
- Solid restraint harness available for push-on pipe bells
- Split restraint harness available for existing push-on pipe bells

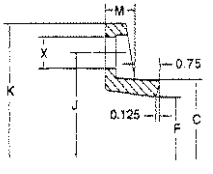
MUST BE SERIES 1100, MEGALUG® AS PRODUCED BY EBAA IRON, INC. OR APPROVED EQUAL.
- All components cast and assembled in the United States by same company with plant visitation available
- Must have a record of a minimum of seven years of manufacturing and sales of the restraint in the United States

DIMENSIONS AND RATINGS

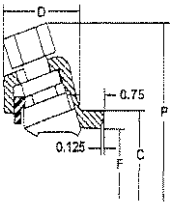
SERIES	NOMINAL PIPE SIZE	C	D	F	M	P (With Nuts Off)	X	J	K	WEDGES QTY	BOLTS QTY	WT LBS	PRESS RATING
1103	3"	4.48	2.27	4.06	0.62	9.06	0.750	6.19	7.69	2	4	6.1	350
1104	4"	5.92	2.27	4.90	0.75	9.90	0.875	7.50	9.12	2	4	7.2	350
1106	6"	8.02	2.27	7.00	0.88	12.00	0.875	9.50	11.12	3	6	12.0	350
1108	8"	10.17	2.31	9.15	1.00	14.15	0.875	11.75	13.37	4	6	16.0	350
1110	10"	12.22	2.37	11.20	1.00	16.20	0.875	14.00	15.62	6	8	24.9	350
1112	12"	14.32	2.37	13.30	1.25	18.30	0.875	16.25	17.88	8	8	32.7	350
1114	14"	16.40	2.69	15.44	1.50	20.94	0.875	18.75	20.25	10	10	49.7	350
1116	16"	18.50	2.69	17.54	1.56	22.90	0.875	21.00	22.50	12	12	58.2	350
1118	18"	20.60	2.69	19.64	1.63	25.00	0.875	23.25	24.75	12	12	62.2	250
1120	20"	22.70	2.69	21.74	1.69	27.10	0.875	25.50	27.00	14	14	74.8	250
1124	24"	26.90	3.20	25.94	1.81	32.64	0.875	30.00	31.50	16	16	138.8	250
1130	30"	33.29	3.20	32.17	2.25	38.87	1.125	36.88	39.12	20	20	195.4	250
1136	36"	39.59	3.20	38.47	2.25	45.17	1.125	43.75	46.00	24	24	256.5	250
1142	42"	45.79	4.56	44.67	3.88	55.57	1.375	50.62	53.48	28	28	510.2	250
1148	48"	52.09	4.56	50.97	3.88	61.87	1.375	57.50	60.36	32	32	712.0	250



REAR VIEW FRONT VIEW



SECTION A - A



SECTION B - B

- For test pressures above the rated pressures shown, consult the EBAA Engineering Dept for recommendations. For projects using large diameter restraints, please contact this office for our design recommendations.
- **The 1100 Series should not be used on plain end fittings.**
- If you experience the need to install the 1110 Series in an unconventional manner please consult our engineering department.
- The 1100 Series is intended for use on ductile iron pipe. The restraint can be used on grey iron pipe if the pipe is not severely corroded and is in sound condition and has an outside diameter that can be accommodated. For more information on the use of the MEGALUG restraint on grey iron pipe ask for *Connections Bulletin* DI-1.
- EBAA Seal Gaskets are provided with the 30" through 48" MEGALUG restraints. Extra length T-bolts are provided with the 42" and 48" sizes to facilitate easier assembly of the mechanical joint. These are required on the above referenced sizes to obtain the pressure ratings and safety factors shown.
- All MEGALUG components are made of ductile iron. The wedges are heat treated to a hardness range of 370 to 470 BHN. The product is coated with the same asphaltic coating specified for the pipe and fittings.
- LISTINGS AND APPROVALS Sizes 3" through 24" are listed by Underwriters Laboratories, Inc., Category HJKF "Fittings, Retainer Type," with a deflection angle of 5 degrees (3" through 12") and 2-1/2 degrees (14" through 24".) The listing file number is EX2836. Sizes 3" through 12" are Factory Mutual approved.

EBAA IRON™
EBAA IRON SALES, INC.
"Your Connection to the Future"™

EBAA IRON SALES INC.
P.O. BOX 857 EASTLAND, TEXAS 76448
800-433-1716 FAX 254-629-8931
ebaa@eastland.net Visit our Web Site: www.ebaa.com

M&H Valve Co.
ANNISTON, ALABAMA

SUGGESTED SPECIFICATIONS FOR:

M&H AWWA Fire Hydrants - U/L-F.M. Approved

■ Style 929 Reliant.

GENERAL

Fire hydrants shall comply in all respects with AWWA Standard C-502, latest revision. Fire hydrants shall be of the compression type, with the main valve opening against the pressure and closing with the pressure. The main valve opening shall be (4½"or 5¼") in diameter. Fire Hydrant shall be of a dry barrel, dry top design. The main valve on the hydrant shall remain closed, should the hydrant nozzle section be broken off by a traffic accident. The nozzle section shall be Three-Way, consisting of two (2) hose nozzles and one (1) pumper connection.

RATING

Fire hydrants shall be rated at 200 psi water pressure, tested at 400 pounds hydrostatic for structural soundness in the following manner: 400 pound hydrostatic test supplied from the inlet side, first with the main valve closed for the testing of the valve seat; second with the main valve open for testing of the drain valves and the barrel. Testing to be completed in accordance with AWWA C-502, any UL/FM requirements

END CONFIGURATIONS

Hydrants shall be connected to the main by a 6" fusion bonded, epoxy coated mechanical joint, flange or push-on shoe for C-900 or ductile iron pipe. Mechanical joint shoes and push-on shoes shall be fitted with strapping lugs.

DESIGN

The main valve seat of the hydrant shall be made of rubber and be supported by a one piece bronze top plate and drain valve mechanism and bottom plate. The bottom stem threads of the main valve rod shall be fitted with an epoxy coated, cast iron bottom plate and nut, sealing lower rod threads from the water. Drain valves shall be faced with rubber.

Changes in size or shape of the waterway shall be accomplished by means of easy curves. Exclusive of the main valve opening, the net area of the waterway of the barrel and the foot piece at the smallest part shall not be less than 120% of that of the net opening of the main valve.

Hose and steamer nozzles shall be threaded and screwed into the nozzle section. And then mechanically locked to prevent turning.

Hose and steamer caps shall be chained to the hydrant.

The hydrant shall be so designed that when it is in place, no excavation will be required to remove the main valve and movable parts of the drain valve. Further, the hydrants shall be of the type that can be extended without excavating. Hydrants shall be so designed that, in the event of accident, or breaking of the hydrant above or near grade level, the main valve will remain closed. The main valve rod shall be made in two parts and fitted with breakable feature at the ground line flange.

The ground line connection between nozzle section and the barrel shall incorporate the use of breakable lugs. This connection shall be so designed that the nozzle section can be rotated in any increment of 360°. The ground line connection between the barrel and nozzle sections shall have a rubber ring gasket to provide a seal.

The operating threads of the hydrant shall be so designed as to avoid the working of any iron or steel parts against either iron or steel. The operating stem and operating nut threads shall be square or acme type

The operating thread shall be lubricated with grease at the factory and the hydrant shall be equipped with an oil reservoir for convenient lubrication in the field. Access shall be provided through the weather shield to provide lubricant to the oil reservoir.

The operating thread shall be sealed from water at all times when the valve is either in the opened or closed position. The operating rod shall be bronze sheathed where it passes through the double "O" ring sealed oil reservoir chamber.

The bonnet shall be weather proof and utilize a weathershield integral with the external wrench operating nut.

DESIGN
(Continued)

The internal operating nut shall be of bronze and a self-lubricating, anti-friction thrust bearing shall be provided to reduce operating torque. Additionally, the stem will be provided with a top stop nut to insure that when the hydrant is in the full open position, the stem, and the stem coupling are not under compression.

Hydrants shall be of the dry barrel type and hydrant shoe shall have two positive acting non-corrodible drain valves that shall drain the hydrant completely by opening when the main valve is closed, and close tightly in accordance with AWWA C-500 requirements when the main valve is open.

The main valve assembly shall be seated in the hydrant with a bronze to bronze interface to facilitate removal of the main valve, should maintenance be required. The nozzle section shall consist of two 2" hose nozzles to the specified thread designation (NST or other, as specified) and one pumper nozzle 4½" in diameter to the specified thread designation (NST or other, as specified).

Hydrant standpipe shall be ductile iron and single piece for all bury depths.

All like parts of hydrants of the same size and model produced by the same manufacturer shall be inter-changeable.

Hydrant shall open by turning to the (left or right).

Threads on hose and steamer nozzles shall be National Standard unless otherwise specified.

Size and shape of operating nuts and cap nuts shall conform to *National Standard* unless otherwise specified.

Bury shall be (specify depth of bury) measuring depth from grade line to bottom of trench or connecting pipe.

Auxiliary shut-off (isolation) gate valves, when required, shall be of the same manufacture as the hydrant.

COATING

The inside of all hydrants shall be coated in accordance with AWWA standards except for bronze and machined surfaces. Exterior of hydrant nozzle section shall be painted Fire Hydrant Red (or as specified).

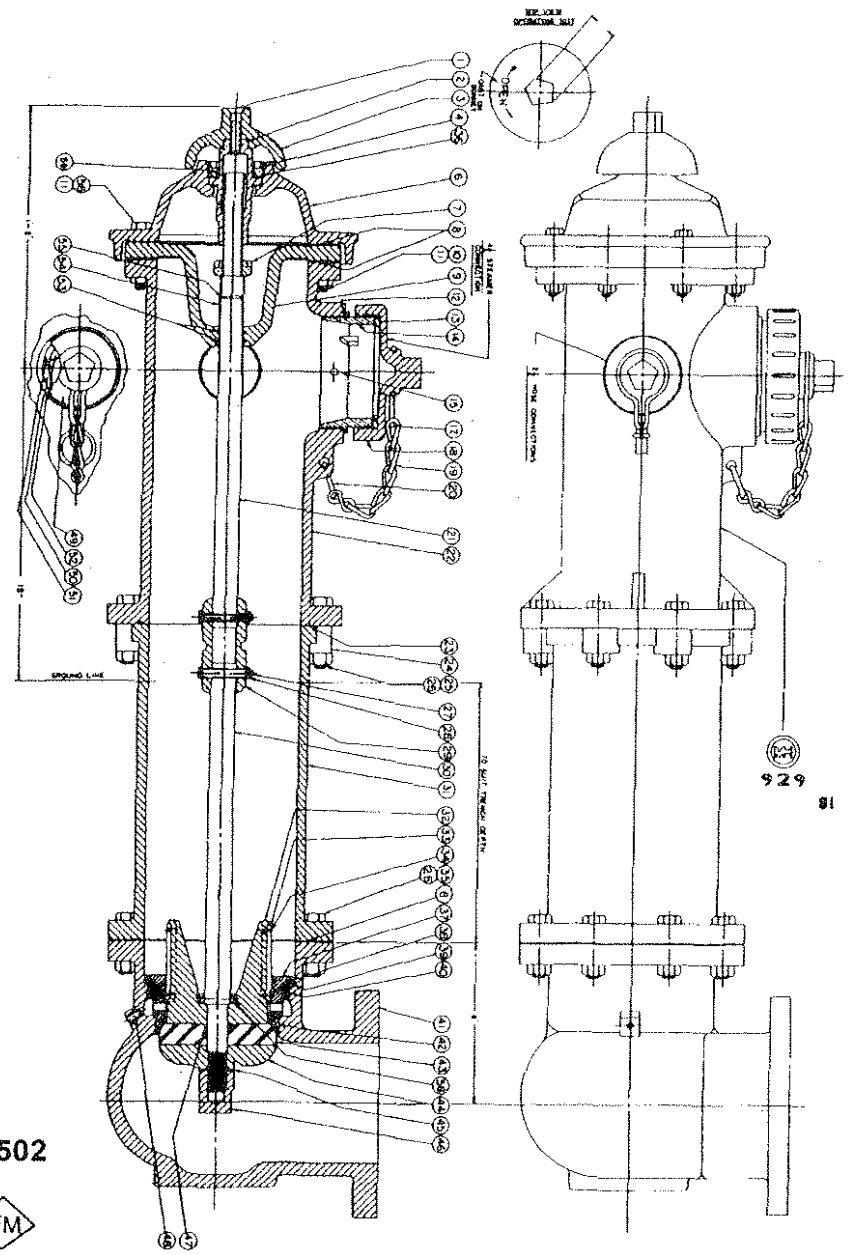
Hydrant shoes shall have protective, thermosetting epoxy coating applied inside and out before assembly. Prior to application of coating, shoes shall be mechanically and chemically cleaned in compliance with SSPC Standards SP-5 and SP-8. Average dry film thickness of 3 mils shall be applied on interior and exterior surfaces of hydrant shoe. Coating designation to be M&H 0601 epoxy and conform fully to AWWA C550-81, Section 3.

MARKINGS

Hydrant shall be marked with the name of the manufacturer, size of valve opening, and the year of manufacture, all in accordance with AWWA C-502.

SOURCE

Hydrants shall be M&H Style 929 "Reliant".



AWWA C502

UL FM

5 1/4" STYLE 929

ITEM NO.	NO REQ'D	DESCRIPTION	MATERIAL
1	1	WEATHER SHIELD BOLT/OIL FILL PLUG	STEEL ASTM A574
2	1	STEM NUT	BRONZE ASTM B584 (CDA 84400)
3	1	WEATHER SHIELD	CAST IRON ASTM A 126 CLASS B
4	1	STEM NUT LOCK NUT	BRONZE ASTM B584 (CDA 84400)
6	1	BONNET	CAST IRON ASTM A 126 CLASS B
7	1	STEM STOP	BRONZE ASTM B584 (CDA 84400)
8	3	FLANGE GASKETS	NON-ASBESTOS
9	1	O RING SEAL PLATE	CAST IRON ASTM A 126 CLASS B
10	3	SEAL PLATE BOLTS	STEEL PLATED ASTM A-307
11	6	BONNET & SEAL PLATE NUTS	STEEL PLATED ASTM A-563
12	1	PUMPER NOZZLE O RING	RUBBER
13	1	PUMPER CAP GASKET	RUBBER
14	1	PUMPER NOZZLE	BRONZE ASTM B584 (CDA 84400)
15	3	Socket Head Cap Screw	STAINLESS STEEL
17	3	CHAIN PEAR LINK	STEEL
18	1	PUMPER NOZZLE CAP	CAST IRON ASTM A 126 CLASS B
19	3	NOZZLE CAP CHAIN	STEEL
20	1	CHAIN RING	STEEL
21	1	UPPER STEM	STEEL
22	1	NOZZLE SECTION	CAST IRON ASTM A 126 CLASS B
23	1	GROUND FLANGE GASKET	RUBBER
24	6	BREAKAWAY LUG	CAST IRON ASTM A 126 CLASS B
25	6	BREAKAWAY JOINT BOLTS	STEEL PLATED ASTM A-307
26	12	BREAKAWAY JOINT NUTS	STEEL PLATED ASTM A-563
27	2	STEM BREAKAWAY BOLT	STEEL PLATED ASTM A-307
28	2	STEM BREAKAWAY NUT	STEEL PLATED ASTM A-563
29	1	STEM BREAKAWAY COUPLING	CAST IRON ASTM A/n CLASS B
30	1	LOWER STEM	STEEL
31	1	STANDPIPE	DUCTILE IRON
32	1	TOP PLATE	BRONZE ASTM B584 (CDA 84400)
33	2	DRAIN VALVE FACING	RUBBER
34	5	RIVETS	COPPER
35	6	SHOE STANDPIPE BOLTS	STEEL PLATED ASTM A-307
36	1	THRUST WASHER	NYLON
37	1	SEAT RING	BRONZE ASTM B584 (CDA 84400)
38	1	SEAT RING SEAL (UPPER)	RUBBER
39	1	O RING	RUBBER
40	1	RETAINER RING	BRONZE ASTM B584 (CDA 84400)
41	1	HYDRANT SHOE	CAST IRON ASTM A126 CLASS B
42	1	SEAT RING SEAL (LOWER)	RUBBER
43	1	MAIN VALVE	RUBBER
44	1	BOTTOM PLATE	CAST IRON ASTM A 126 CLASS B
45	1	LOCK RING	STAINLESS STEEL
46	1	CAP NUT	CAST IRON ASTM A 126 CLASS B
47	1	LOWER STEM SEAL	RUBBER
48	2	DRAIN VALVE BUSHING	BRONZE B-135
49	2	HOSE NOZZLE CAP	CAST IRON ASTM A 126 CLASS B
50	2	HOSE NOZZLE O RING	RUBBER
51	2	HOSE NOZZLE	BRONZE ASTM B584 (CDA 84400)
52	2	HOSE CAP GASKET	RUBBER
53	2	SEAL PLATE O RING	RUBBER
54	1	UPPER STEM SLEEVE	BRASS
55	1	STEM SLEEVE O RING	RUBBER
56	3	BONNET BOLTS	STEEL PLATED ASTM A-307
58	1	STEM LOCK PIN	C.D. STEEL
59	1	STEM NUT LOCK NUT O RING	RUBBER

200 LBS.- WATER WORKING PRESSURE

400 LBS.- HYDROSTATIC TEST PRESSURE

HYDRANT SHOE AVAILABLE IN THESE STYLES:
-- FLANGED

-- MECH. JOINT

STYLE NO. 929

5 1/4" TRAFFIC MODEL FIRE HYDRANT
A.W.W.A COMPRESSION TYPE

M&H Valve Co.
Anniston, Alabama

DRAWN BY J.L.W.	DATE 9-22-81
CHECKED	SCALE NONE
APPROVED	
DWG NO 12075	REV. F

HD Fowler Company - MH4067MF22L

M&H
RESILIENT
WEDGE VALVES (1993)
M&H VALVE CO.

M&H VALVE Resilient Wedge Gate Valves
Meet or Exceed the Requirements of
AWWA Standard C509
UL-262/FM-1120/1130

Size Range	Water Working Pressure psi	Bubble-Tight Test psi	Hydrostatic Shell Test psi
2"-12"	250	250	500
14"-24"	200	200	400
ULFM 4" - 12"	200	200	400

Available in either non-rising stem or outside screw & yoke.

Available End Connections & Size Range		Figure No. (STD)	Figure No. with Post Plate
Flg. End (NRS)	2" - 24"	4067-02	(3" - 12") 4067-02P
M.J.	2" - 24" (except 2 1/2	4067-01	(3" - 12") 4067-01P
Flg. & M.J.	3" - 24"	4067-13	4067-13P
Push-on for PVC (SDR)	2" - 8"	4067-03	(3" - 8") 4067-03P
Flg. End (OS&Y)	2 1/2" - 12"	4068-02	N/A
M.J. for Tapping	4" - 24"	4751-01	4751-01P
Push-on for D.I. & C900 PVC	4" - 12"	4067-22	4067-22P
M.J. Cutting-in	4" - 8"	---	(Consult K.V.)
Push-on D.I. x Flg.	4" - 12"	4067-23	4067-23P
Threaded	2" - 3"	4067-07	(3" only) 4067-07P

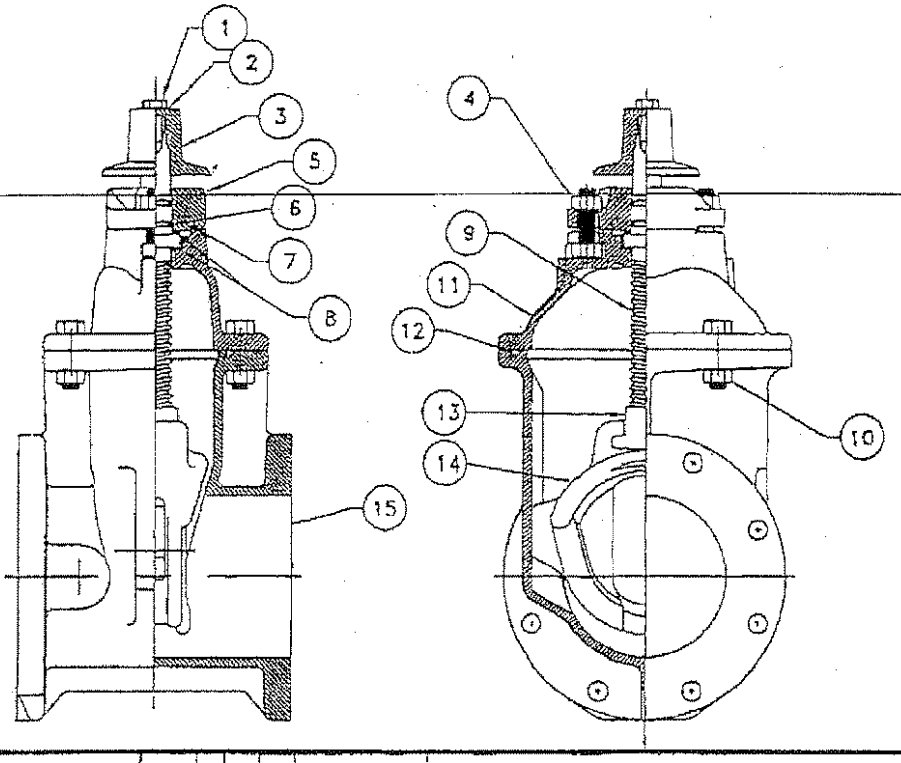
Accessories

Indicator Posts	Handwheels
"T" Handles	Extesion Stems
Stem Guides	Floor Boxes
2" Sq. Operating Nuts	Chain Wheels
Floorstands (non-rising stem)	

C509

HD Fowler Company - MH4067MF22L

ITEM	DESCRIPTION		MATERIAL	ASTM SPEC.
1	HEX HEAD BOLTS		ZINC PLATED STEEL	ASTM A307 GRADE B
2	FLAT WASHERS		ZINC PLATED STEEL	ASTM A307 GRADE B
3	OPERATING NUT OR HAND WHEEL		CAST IRON	ASTM A126 Cl B
4	HEX HEAD BOLTS & NUTS		ZINC PLATED STEEL	ASTM A307 GRADE B
5	FOLLOWER PLATE	2"-8"	CAST IRON	ASTM A126 Cl B
		10"-12"	DUCTILE IRON	ASTM A536 70-50-05
6	O-RING (STEM)		BUNA N	----------
7	O-RING (STUFFING BOX)		BUNA N	----------
8	THRUST WASHER		DELRIN	----------
9	STEM (AWWA GRADE C)		BRONZE	ASTM B584 CDA 867
10	HEX HEAD BOLTS & NUTS		ZINC PLATED STEEL	ASTM A307 GRADE B
11	COVER		CAST IRON	ASTM A126 Cl B
12	O-RING (COVER)		BUNA N	----------
13	STEM NUT (AWWA GRADE A)		BRONZE	ASTM A584 CDA 844
14	WEDGE DISC		CAST IRON & SBR	ASTM A126 CL B
15	BODY - ALL TYPES		CAST IRON	ASTM A126 Cl B
16	WEDGE PROTECTOR CAP		DELRIN	----------



REVISIONS	DATE	S	BY	APP
-	------	-	---	---

TOLERANCES UNLESS OTHERWISE SPEC'D.
MACHINED
DEC. ±.005
FRACT. ±1/64
ANGLES ±1°
SURF. FIN. 125
RADII 1/32
CASTING DIM.
0-4 ±1/32
4-8 ±3/64
8-12 ±1/16
12-16 ±3/32
16 UP ±1/8
DRAFT 2°

RESILIENT SEAT GATE-2" THRU 12" VALVE ASSEMBLY NRS - STYLE 4067

M&H VALVE COMPANY
A DIVISION OF McWANE, Inc.
P.O. BOX 2088
ANNISTON, ALABAMA 36202

DWN: RJ	DATE: 04/12/01
CHK:	SCALE: NONE
APP:	DWG. NO. 4067 REV.
L.P.D.:	

MAR 31 2005 14:37

503 255 1995

PAGE.02

TRANSMITTAL OF SHOP DRAWINGS, EQUIPMENT DATA, MATERIAL SAMPLES, OR MANUFACTURER'S CERTIFICATES OF COMPLIANCE (Read instructions on reverse side prior to initiating this form)	DATE	TRANSMITTALL NO.
	3/31/2005	4

SECTION I - REQUEST FOR APPROVAL OF THE FOLLOWING ITEMS (This section will be initiated by the contractor)

TO:	FROM:	CONTRACT NO.	CHECK ONE:
Ecology & Environment 2101 Fourth Ave. Ste.1900 Seattle,WA. Attn: Alexander Whitman	Wilder Construction Company 6645 NE 78th Ct. SteC-10 Portland,OR.97218 (503)255-1444	Mac& Baxter Support	[X] THIS IS A NEW TRANSMITTAL [ ] THIS IS A RESUBMITTAL OF TRANSMITTAL _____

SPECIFICATION SEC. NO. (Cover only one section with each transmittal)	PROJECT TITLE AND LOCATION	CHECK ONE: THIS TRANSMITTAL IS
	McCOrmick & Baxter Support Facility Modifications	FOR [ ] FIO [X] E&E approval

ITEM NO. a.	DESCRIPTION OF ITEM SUBMITTED (Type size, model numbers / etc.) b.	MFG OR CONTR. CAT., CURVE DRAWING OR BROCHURE NO. (See instruction no. 8) c.	NO. OF COPIES d.	CONTRACT REFERENCE DOCUMENT		FOR CONTRACTOR USE CODE g.	VARIATION (See instructions No.6) h.	FOR CE USE CODE i.
				SPEC. PARA NO. e.	DRAWING SHEET NO. f.			
1	Hydrant Valve/Service Vault w/ Galvanized lid	Cat.	1		4			
2	Backflow Valve Vault w/Aluminum Doors	Cat.	1		4			
3								

REMARKS

Item two will be provided without the bottom section. It will be provided with 2 hatch aluminum door

I certify that the above submitted Items have been reviewed in detail and are correct and in strict conformance with the contract drawings and specifications except as other wise stated

_____

NAME AND SIGNATURE OF CONTRACTOR

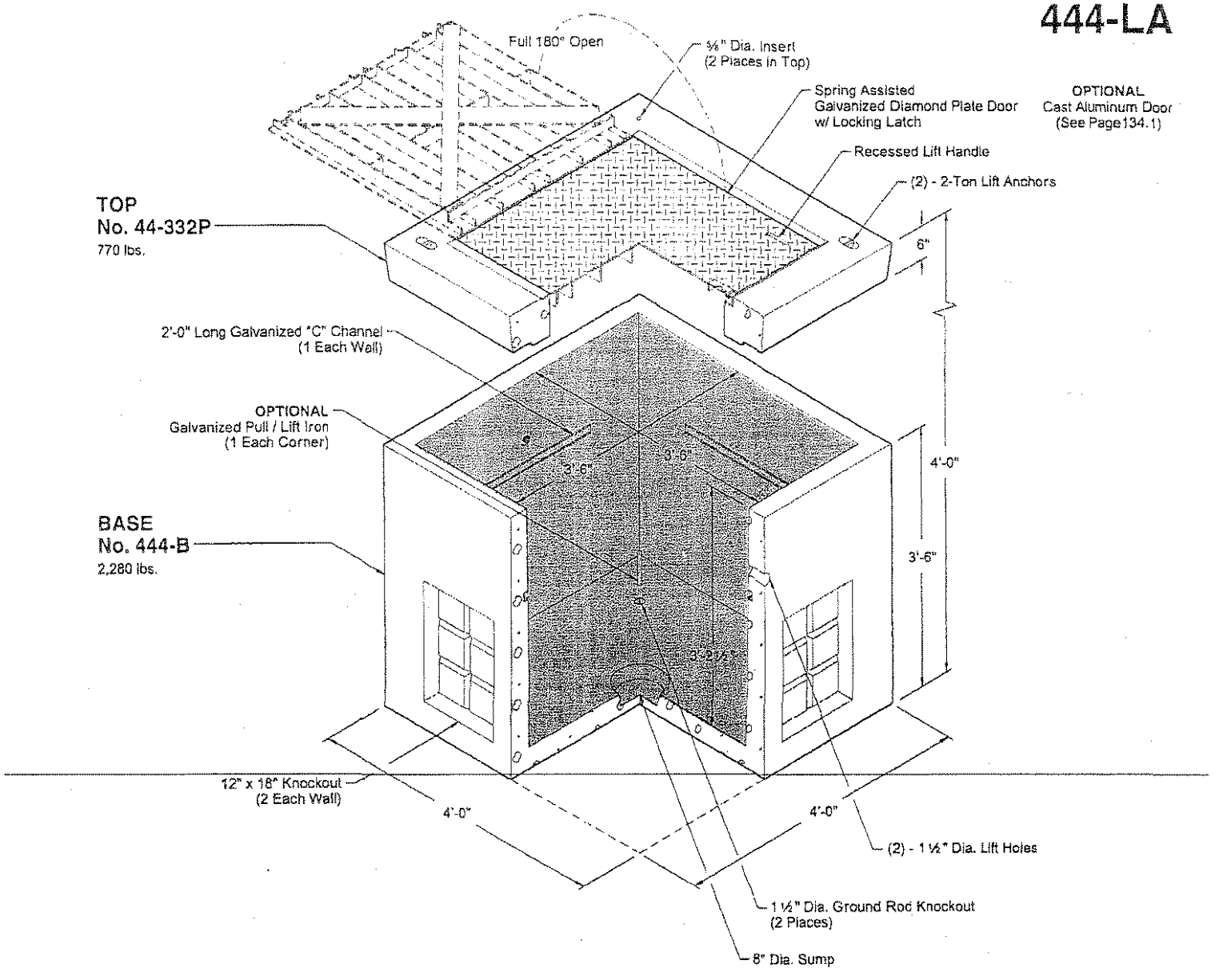
SECTION II - APPROVAL ACTION

ENCLOSURES RETURNED (List by Item No.)	NAME, TITLE AND SIGNATURE OF APROVAING AUTHORITY	DATE
	_____	_____

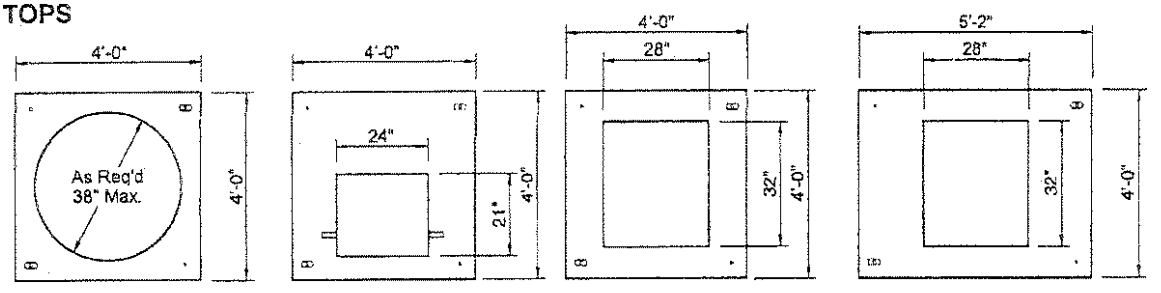
EXCEL VERSION OF ENG FORM 4025-R, 14 JUNE 2001

Filename - Submittal MAC

444-LA



OPTIONAL TOPS



ROUND ACCESS
No. 44-38C (Shown)
660 lbs.

PADMOUNT
No. 44-2124
940 lbs.

PADMOUNT
No. 44-2832
730 lbs.

PADMOUNT
No. 45-2832
1,080 lbs.

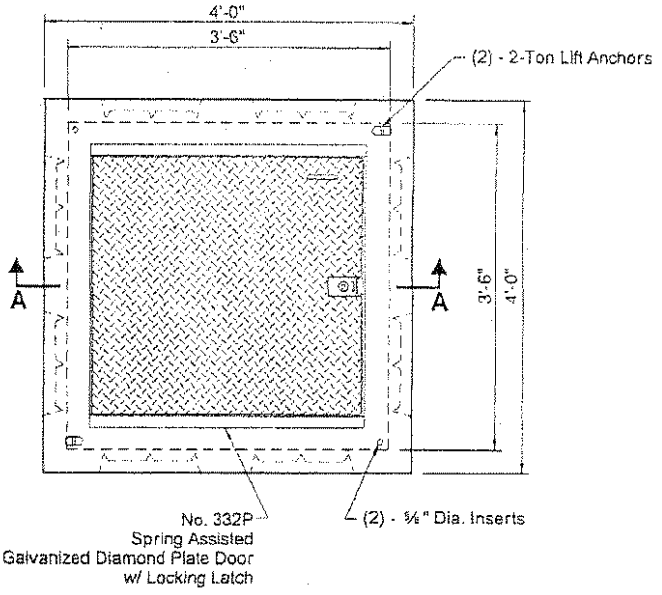
For Details and Additional Information, See:

- Reverse Side
- ACCESS DOORS Section
- RISERS Section
- Racking and Hardware, Page 64.0

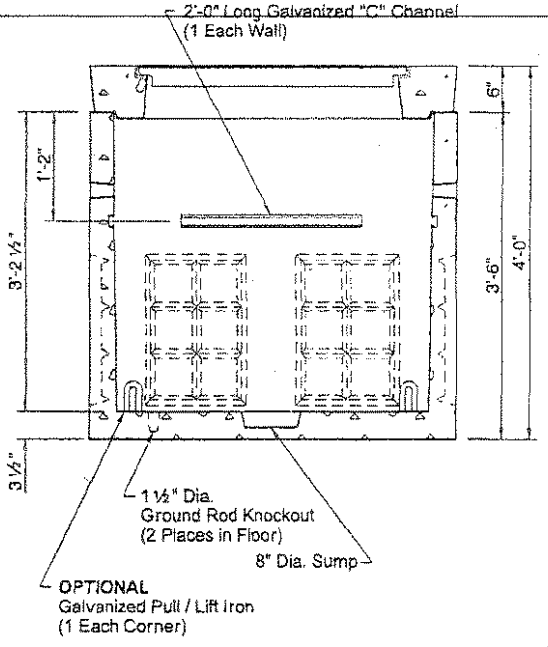
*** ITEMS SHOWN ARE SUBJECT TO CHANGE WITHOUT NOTICE.**

UTILITY VAULT™
PO Box 323
Wilsonville, Oregon 97070-0323
Phone (503) 682-2844
Fax (503) 682-2657
Division of Oldcastle Precast, Inc.

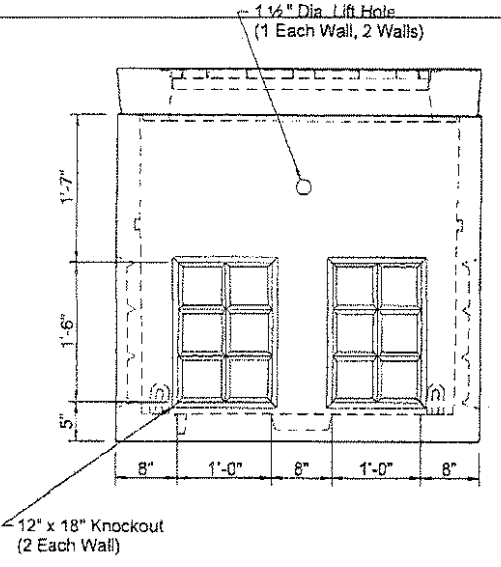
444-LA



PLAN VIEW



SECTION AA



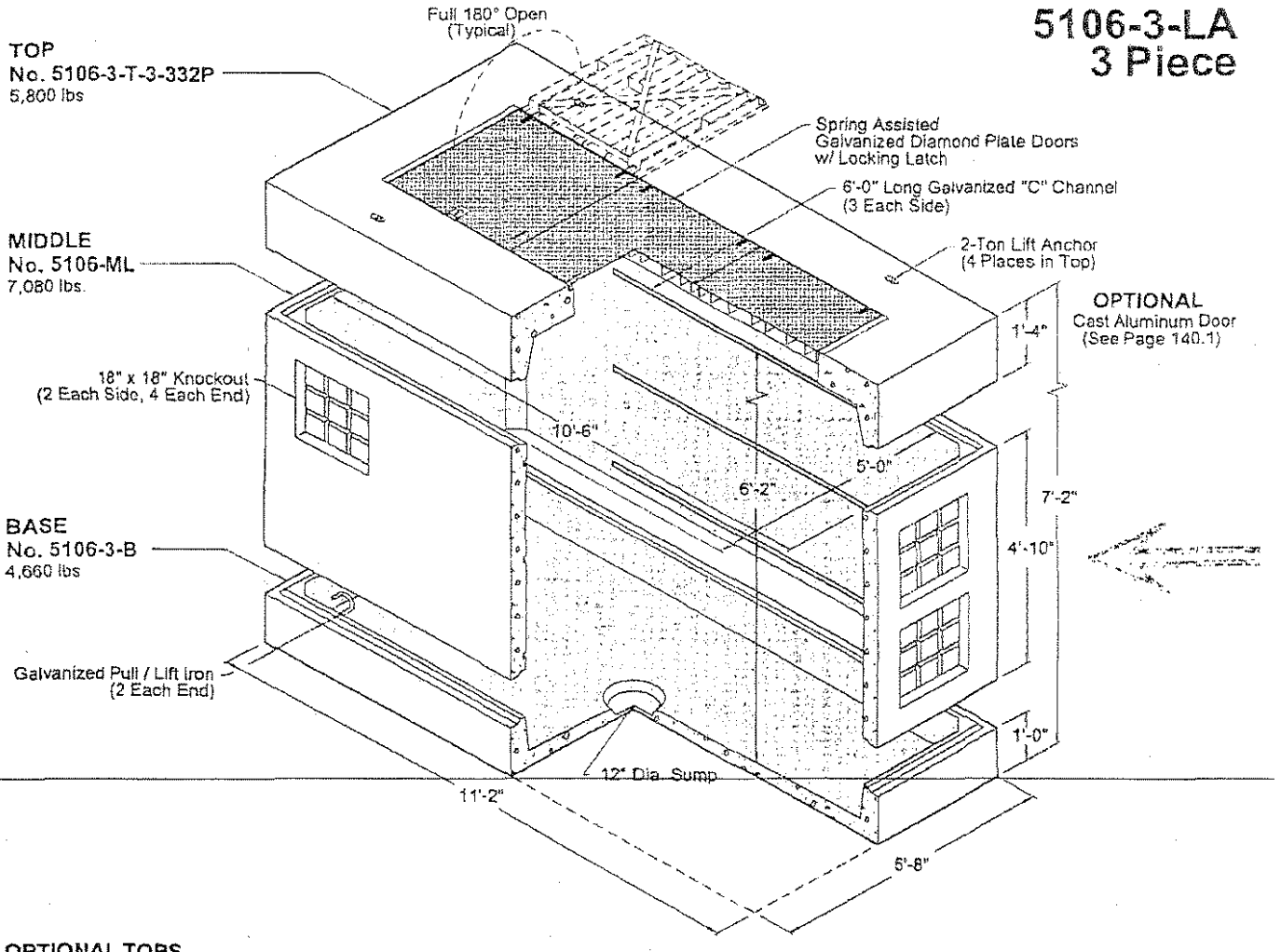
SIDE VIEW

SCALE: ½" = 1'-0"

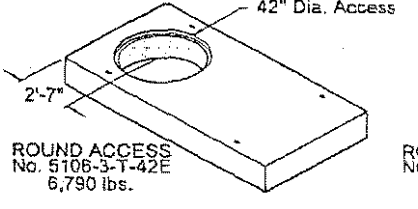
UTILITY VAULT™
PO Box 323
Wilsonville, Oregon 97070-0323
Phone (503) 682-2844
Fax (503) 682-2657
Division of Oldcastle Precast, Inc.

* ITEMS SHOWN ARE SUBJECT TO CHANGE WITHOUT NOTICE.

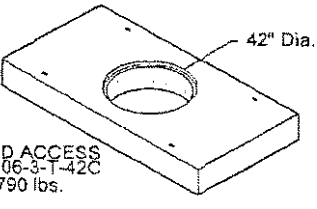
5106-3-LA
3 Piece



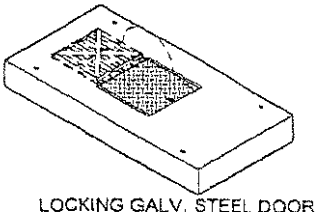
OPTIONAL TOPS



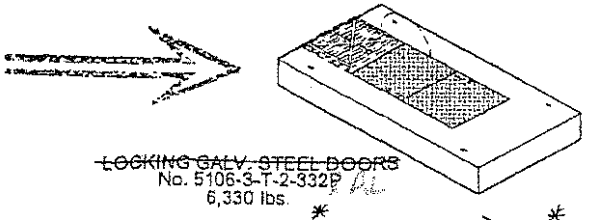
ROUND ACCESS
No. 5106-3-T-42E
6,790 lbs.



ROUND ACCESS
No. 5106-3-T-42C
6,790 lbs.

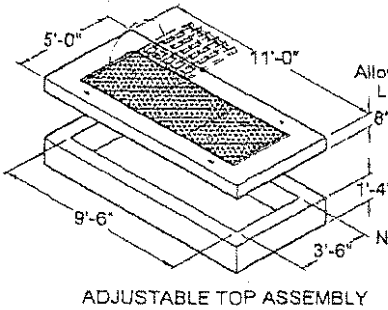


LOCKING GALV. STEEL DOOR
No. 5106-3-T-332P
7,110 lbs.



~~LOCKING GALV. STEEL DOORS~~
No. 5106-3-T-2-332P *Al*
6,330 lbs.

Aluminum Doors



ADJUSTABLE TOP SLAB
Allows for Future Grade Adjustments
LOCKING ALUMINUM DOORS
No. 5106-AT-3-332AL
3,440 lbs.

TOP
No. 5106-3-T-42/114
4,800 lbs.

ADJUSTABLE TOP ASSEMBLY

UTILITY VAULT™
PO Box 323
Wilsonville, Oregon 97070-0323
Phone (503) 682-2644
Fax (503) 682-2657
a division of Oldcastle Precast, Inc.

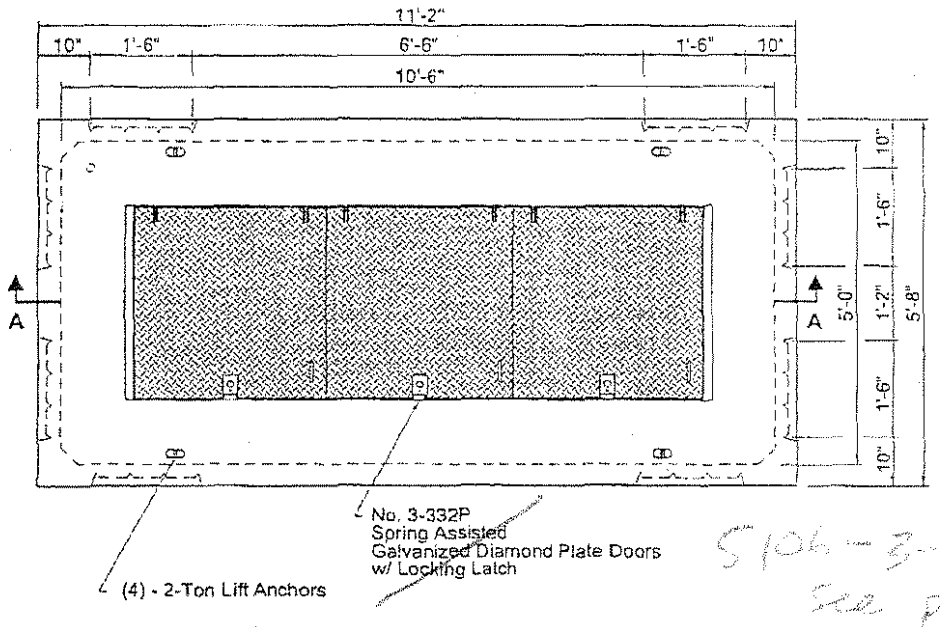
For Details and Additional Information, See:

- Reverse Side
- ACCESS DOORS Section
- RISERS Section
- Racking and Hardware, Page 70.0

* ITEMS SHOWN ARE SUBJECT TO CHANGE WITHOUT NOTICE.

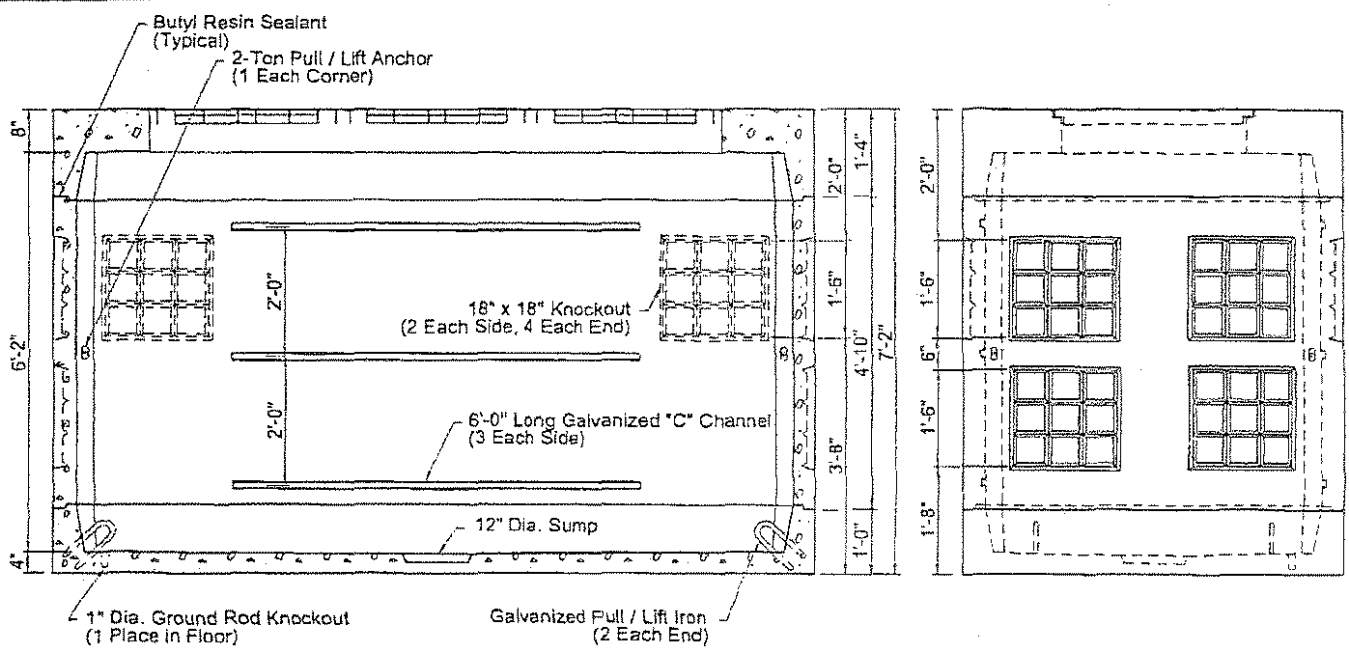
 Issue: 2000

5106-3-LA
3 Piece



5106-3-T-2-332 AL
See page 32.0

PLAN VIEW



SECTION AA

END VIEW

SCALE: 3/8"=1'-0"

UTILITY VAULT™
PO Box 323
Wilsonville, Oregon 97070-0323
Phone (503) 682-2844
Fax (503) 682-2557
a division of Oldcastle Precast, Inc.

* ITEMS SHOWN ARE SUBJECT TO CHANGE WITHOUT NOTICE.

 Issue: 2000

TRANSMITTAL OF SHOP DRAWINGS, EQUIPMENT DATA, MATERIAL SAMPLES, OR MANUFACTURER'S CERTIFICATES OF COMPLIANCE (Read instructions on reverse side prior to initiating this form)	DATE	TRANSMITTALL NO.
	4/4/2005	7

SECTION I - REQUEST FOR APPROVAL OF THE FOLLOWING ITEMS (This section will be initiated by the contractor)

TO:	FROM:	CONTRACT NO.	CHECK ONE:
Ecology & Environment 2101 Fourth Ave.Suite 1900 Seattle,Wa. 98121 Attn: Zander Whitman	Wilder Construction Company 6645 NE 78th Ct. SteC-10 Portland,OR.97218 (503)255-1444	Mac &Bac Support	[x] THIS IS A NEW TRANSMITTAL [ ] THIS IS A RESUBMITTAL OF TRANSMITTAL

SPECIFICATION SEC. NO. (Cover only one section with each transmittal)	PROJECT TITLE AND LOCATION	CHECK ONE: THIS TRANSMITTAL IS
2520	McCOrmick & Baxter Support Facility Modifications	FOR [ ] FIO [X] E&E approval

ITEM NO. a.	DESCRIPTION OF ITEM SUBMITTED (Type size, model numbers / etc.) b.	MFG OR CONTR. CAT., CURVE DRAWING OR BROCHURE NO. (See instruction no. 8) c.	NO. OF COPIES d.	CONTRACT REFERENCE DOCUMENT SPEC. PARA NO. e.	CONTRACT REFERENCE DOCUMENT DRAWING SHEET NO. f.	FOR CONTRACTOR USE CODE g.	VARIATION (See Instructions No.8) h.	FOR CE USE CODE i.
	3/4" service fittings							
1	Service Saddles	Cat.	1					
2	Corporation Valves	Cat.						
3	Copper Tubing	Cat.						

REMARKS

I certify that the above submitted items have been reviewed in detail and are correct and in strict conformance with the contract drawings and specifications except as other wise stated

Mike Fay 4/4/05

NAME AND SIGNATURE OF CONTRACTOR

SECTION II - APPROVAL ACTION

ENCLOSURES RETURNED (List by Item No.)	NAME, TITLE AND SIGNATURE OF APROVAING AUTHORITY	DATE

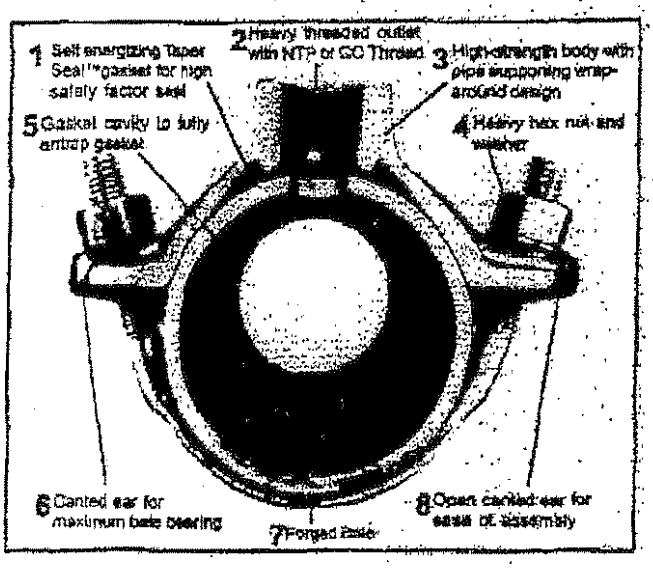
EXCEL VERSION OF ENG FORM 4025-R, 14 JUNE 2001

Filename - Submittal MAC

Smith-Blair®

Clamp and Coupling products

311 & 313 TaperSeal™ Service Saddles Ductile Iron



Smith-Blair® TaperSeal™ Wrap-around Service Saddles are designed to provide maximum support and reinforcement of the pipe as the result of nearly 360° contact. When installed on a pipe with an outside diameter that is equal to or near to the top of the saddle's O.D. range, the saddle body wraps around the pipe approximately 160°. On a pipe that has an O.D. equal to or near to the bottom of the saddle's O.D. range, the saddle body will wrap around the pipe approximately 180°.

As the bale bolts are tightened, tangential pull directs the mechanical forces toward and around the pipe, uniformly distributing pressure around the circumference of the pipe to support and reinforce it.

Sealing Qualities

Smith-Blair® Service Saddles are designed to hold high pressures with just a few pounds of torque applied to the bale nuts. The unique, pressure-energized TaperSeal™ gasket, which seals as the result of both mechanical and hydrostatic pressures, is contained within a tapered gasket cavity cast into the saddle body. This feature provides a positive hydro-mechanical seal, and prevents the gasket from being blown out along the pipe. At the recommended torque on the bale nuts, Smith-Blair® Service Saddles are designed to hold pressures in excess of the working pressure of the pipe.

Stability of Pipe

The wide skirt on Smith-Blair® TaperSeal™ Service Saddle bodies, combined with the wrap-around feature, results in excellent stability of the saddle on the pipe. These two features work together to prevent the saddle from rocking or creeping on the pipe, as might be caused by vibration, pressure or excessive external loading. This makes possible the use of single bale saddles instead of double bale saddles on many installations, resulting in substantial savings.

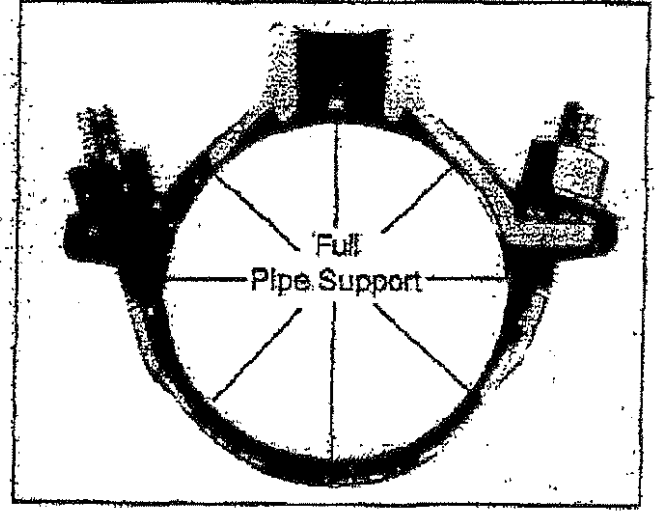
Single or Double Bale

The optimum number of bales needed is based on two factors: the pipe O.D. and the outlet size. Double straps are necessary to accommodate for larger pipe O.D.'s and to equalize gasket pressure around larger outlets.

Easy to Install

For fast, easy installation, Smith-Blair® TaperSeal™ Service Saddles feature a closed lug on one side of the body that holds one end of the strap and its nut in place and acts as a hinge. The other side features an open, canted lug into which the other end of the bale and its nut and washer can be slipped. Therefore, there are no loose parts and disassembly is not required.

Full Pipe Support--Design Superiority



311 Service Saddles, Ductile Iron, Single Bale
3/4" and 1" NPT Taps

U.S.					Metric			
Nom. Size Inches	O.D. Range Inches	Wt. Each Lbs.	Catalog Number		Ctn. Qty.	Nom. Size M.M.	O.D. Range M.M.	Wt. Each Kg.
			3/4" NPT/20MM	1" NPT/25MM				
1	1.31-1.39	.9	311-013906-000	N.A.	12	25-32	33-35	.4
1-1/14-1-1/2	1.61-192	1.3	311-019206-000	311-019256-000	12	40	41-48	.6
2	2.35-2.56	1.6	311-025606-000	311-025606-000	12	50	60-65	.7
2	2.38	1.6	311-023806-000	311-023806-000	12	50	60	.7
2-1/4-2-1/2	2.44-2.91	1.9	311-029106-000	311-029106-000	8	57-65	62-73	.9
3	2.97-3.54	2.4	311-035406-000	311-035406-000	12	80	76-89	1.1
3-4	3.74-4.55	2.9	311-045506-000	311-045506-000	12	80-100	95-115	1.3
4-5	4.74-5.63	3.2	311-056306-000	311-056306-000	10	100-125	121-143	1.5
5-6	5.94-6.90	4.3	311-066306-000	311-066306-000	8	125-150	151-175	2.0
6	6.84-7.60	4.6	311-076006-000	311-076006-000	10	150	174-193	2.1
6-8	7.66-8.08	4.8	311-080806-000	311-080806-000	10	150-200	195-205	2.2
6-8	7.59-8.72	5.0	311-087206-000	311-087206-000	10	150-200	195-221	2.3
6-8	7.66-9.05	5.0	311-090506-000	311-090506-000	10	150-200	195-230	2.3
8-10	8.54-10.10	5.3	311-101006-000	311-101006-000	10	200-250	217-256	2.4
10-12	10.64-12.12	5.4	311-121206-000	311-121206-000	6	250-300	271-307	2.5
12-14	12.62-14.32	6.5	311-143206-000	311-143206-000	6	300-350	321-363	2.9

1-1/4", 1-1/2" and 2" NPT Taps

U.S.						Metric			
Nom. Size Inches	O.D. Range Inches	Wt. Each Lbs.	Catalog Number			Ctn. Qty.	Nom. Size M M	O.D. Range M M	Wt. Each Kg.
			1-1/4" NPT/32MM	1- 1/2" NPT/40 MM	2" NPT/50 MM				
2	2.35-2.56	2.2	311-025610-000	311-025612-000	N.A.	6	50	60-65	1.0
2-1/4-2-1/2	2.44-2.91	2.7	311-029110-000	311-029112-000	N.A.	6	57-65	62-73	1.2
3	2.97-3.54	3.0	311-035410-000	311-035412-000	N.A.	6	80	76-89	1.4
3-4	3.74-4.55	4.4	311-045510-000	311-045512-000	311-045514-000	6	80-100	95-115	2.0
4-5	4.74-5.63	4.8	311-056310-000	311-056312-000	311-056314-000	6	100-125	121-143	2.2
5-6	5.94-6.90	5.0	311-066310-000	311-066312-000	311-066314-000	6	125-150	151-175	2.3
6	6.84-7.60	5.5	311-076016-000	311-076012-000	311-076014-000	6	150	174-193	2.5
6-8	7.66-8.08	5.8	311-080816-000	311-080812-000	311-080814-000	6	150-200	195-205	2.6
6-8	7.59-8.72	6.0	311-087216-000	311-087212-000	311-087214-000	6	150-200	195-221	2.7
*6-8	7.59-9.05	6.0	311-090516-000	311-090512-000	311-090514-000	6	150-200	195-230	2.7
8-10	8.54-10.10	6.2	311-101016-000	311-101012-000	311-101014-000	6	200-250	217-256	2.8
10-12	10.64-12.12	6.2	311-121216-000	311-121212-000	311-121214-000	6	250-300	271-307	2.8
12-14	12.62-14.32	6.5	311-143216-000	311-143212-000	311-143214-000	6	300-350	321-363	3.0

3/4" - 2" MUELLER® 300™ BALL CORPORATION VALVES

B-25008

MUELLER® 300™ Ball Corporation Valve
Inlet: AWWA taper (MUELLER "CC") thread
Outlet: MUELLER® 110® Conductive Compression Connection for CTS O.D.* tubing

3/4"	3/4" x 1"	1"	1-1/2"	1-1/2" x 2"	2"

B-25028

MUELLER® 300™ Ball Corporation Valve
Inlet: AWWA I.P. thread
Outlet: MUELLER® 110® Conductive Compression Connection for CTS O.D. tubing

3/4"	3/4" x 1"	1"	1-1/2"	1-1/2" x 2"	2"

B-25009

MUELLER 300 Ball Corporation Valve
Inlet: AWWA taper (MUELLER "CC") thread
Outlet: MUELLER ® 110 ® Compression Connection for IPS PE* pipe

3/4"	3/4" x 1"	1"

B-25029

MUELLER 300 Ball Corporation Valve
Inlet: AWWA I.P. thread
Outlet: MUELLER 110® Compression Connection for IPS PE* pipe

3/4"	3/4" x 1"	1"

E-25009

MUELLER 300 Ball Corporation Valve
Inlet: AWWA taper (MUELLER "CC") thread
Outlet: MUELLER Pack Joint for IPS PE** pipe
**Note: 3/4" size only may also be used on PVC

3/4"**	1"	1-1/2"	2"

E-25029

MUELLER 300 Ball Corporation Valve
Inlet: AWWA I.P thread
Outlet: MUELLER Pack Joint for IPS PE** pipe
**Note: 3/4" size only may also be used on PVC

3/4"**	1"	1-1/2"	2"

V-25056

MUELLER 300 Ball Corporation Valve
Inlet: AWWA taper (MUELLER "CC") thread
Outlet: MUELLER Pack Joint for IPS PVC pipe

1"	1-1/2"	2"

V-25058

MUELLER 300 Ball Corporation Valve
Inlet: AWWA I.P thread
Outlet: MUELLER Pack Joint for IPS PVC pipe

1"	1-1/2"	2"

P-25008

MUELLER 300 Ball Corporation Valve
Inlet: AWWA taper (MUELLER "CC") thread
Outlet: MUELLER Pack Joint Connection for CTS O.D. * tubing

3/4"	3/4" x 1"	1"	1-1/2"	1-1/2" x 2"	2"

P-25028

MUELLER 300 Ball Corporation Valve
Inlet: AWWA I.P. thread
Outlet: MUELLER Pack Joint Connection for CTS O.D.* tubing

3/4"	3/4" x 1"	1"	1-1/2"	1-1/2" x 2"	2"

*See charts on pages 5.10-5.13 for tubing and pipe that may be used with these connections.
NOTE: Sizes shown above represent nominal size of inlet and outlet connections. When two sizes are given, the first is size of inlet and the second is size of outlet.
MUELLER Corporation Valves are manufactured and tested in accordance with ANSI/AWWA C800.

CAMBRIDGE-LEE INDUSTRIES, INC.

Cambridge-Lee Industries is a national distributor of copper tubing and related plumbing and refrigeration products.

With 13 warehouses strategically located to provide you with the best possible service available.

PLUMBING TUBE PRODUCT RANGE

PRODUCT	TEMPER	LENGTHS	COLOR CODE	SPECIFICATIONS
COPPER WATER TUBE TYPE K	HARD SOFT	20 FT. STRAIGHT 20 FT. STRAIGHT 60 FT. COILS 1/4 - 1 1/4 100 FT. COILS 1/4 - 1 1/4	GREEN	ASTM - B - 88 FEDERAL - WW - T - 799
COPPER WATER TUBE TYPE L	HARD SOFT	20 FT. STRAIGHT 20 FT. STRAIGHT 60 FT. COILS 1/4 - 1 1/4 100 FT. COILS 1/4 - 1 1/4	BLUE	ASTM - B - 88 FEDERAL - WW - T - 799
COPPER WATER TUBE TYPE M	HARD	20 FT. STRAIGHT	RED	ASTM - B - 88 FEDERAL - WW - T - 799
COPPER DRAINAGE TUBE	HARD	20 FT. STRAIGHT	YELLOW	ASTM - B - 306
ACR (TYPE L)	HARD	20 FT. STRAIGHT	BLUE	ASTM - B - 280
REFRIGERATION TUBE	SOFT	50 FT. COILS 100 FT. COILS	CRIMSON	ASTM - B - 280 FEDERAL - WW - T - 775
COPPER PIPE REGULAR EXTRA HEAVY	HARD	20 FT. STRAIGHT	BLACK	ASTM - B - 42 FEDERAL - WW - P - 377
RED BRASS PIPE REGULAR EXTRA HEAVY	HARD	12 FT. STRAIGHT 1/8 - 4 20 FT. STRAIGHT 1/8 - 3 1/2		ASTM - B - 43 FEDERAL - WW - P - 351
OXY TUBE	HARD	20 FT. STRAIGHT		ASTM - B - 819

SHOP DRAWINGS, EQUIPMENT DATA, MATERIAL SAMPLES, OR MANUFACTURER'S CERTIFICATES OF COMPLIANCE
(Read instructions on reverse side prior to initiating this form)

DATE: 4/20/2005

TRANSMITTALL NO.: 10

SECTION I - REQUEST FOR APPROVAL OF THE FOLLOWING ITEMS (This section will be initiated by the contractor)

Ecology & Environment **2101 Fourth Ave.Suite 1900** **Seattle,Wa. 98121** **Attn: Zander Whitman**	FROM: **Wilder Construction Company** **6645 NE 78th Ct. SteC-10** **Portland,OR.97218** **(503)255-1444**	CONTRACT NO. Mac &Bac Support	CHECK ONE: [X] THIS IS A NEW TRANSMITTAL [ ] THIS IS A RESUBMITTAL OF TRANSMITTAL _____
SPECIFICATION SEC. NO. (Cover only one section with each transmittal) 16000	PROJECT TITLE AND LOCATION **McCOrmick & Baxter Support Facility Modifications**		CHECK ONE: THIS TRANSMITTAL IS FOR [ ] FIO [X] E&E approval

ITEM NO. a.	DESCRIPTION OF ITEM SUBMITTED (Type size, model numbers / etc.) b.	MFG OR CONTR. CAT., CURVE DRAWING OR BROCHURE NO. (See instruction no. 8) c.	NO. OF COPIES d.	CONTRACT REFERENCE DOCUMENT SPEC. PARA NO. e.	CONTRACT REFERENCE DOCUMENT DRAWING SHEET NO. f.	FOR CONTRACTOR USE CODE g.	VARIATION (See Instructions No.8) h.	FOR CE USE CODE i.
1	Electrical Metallic Tubing (EMT)	cat	2					
2	Rigid Conduit	cat	2					
3	Schedule 40 PVC electrical Conduit	cat	2					
4	Indeeco Unit Heater	cat	2					
5	Acme Fan	cat	2					
6	Safe Air.Damper	cat	2					
7	Dowco Louver	cat	2					

REMARKS

I certify that the above submitted items have been reviewed in detail and are correct and in strict conformance with the contract drawings and specifications except as other wise stated.

4/20/05

Mike Grey for Wilder

NAME AND SIGNATURE OF CONTRACTOR

SECTION II - APPROVAL ACTION

ENCLOSURES RETURNED (List by Item No.)	NAME, TITLE AND SIGNATURE OF APROVAING AUTHORITY	DATE

EXCEL VERSION OF ENG FORM 4025-R, 14 JUNE 2001

Filename - Submittal MAC

DATA SHEET

GALVITE® Rigid Steel Conduit

Strong, rigid, safe

GALVITE® Rigid Steel Conduit from LTV Steel offers the highest available strength, rigidity, ductility, system safety and protection. This product is suitable for the most demanding industrial/commercial building and construction service, in both indoor and outdoor environments.

LTV Steel produces GALVITE from high-quality, American-made carbon steel and certifies its domestic manufacture. Integrated Process Control throughout steel melting, strip rolling, forming and welding operations assures consistent properties, accurate sizes and excellent surface quality.

Product features

GALVITE is free from "burnt" or hard spots in the metal. Welds are smooth, strong and sound. The uniformity of metal composition and size assures easier threading and bending. The inside surface is smooth, clean and free from burns and rough spots, enhancing wire pulling.

GALVITE is hot-dipped galvanized inside and out. This tightly adhering finish doesn't chip, peel or flake off even under bending tests more severe than required by specification or encountered in normal installation. A secondary chromate treatment is applied over the galvanizing to extend surface protection.

GALVITE is readily formed and joined. Next to bendability, connecting ease is perhaps the feature most sought by those who work with rigid conduit. GALVITE threads are metallized with zinc to provide added corrosion protection. When short lengths are cut on the job, the ductility and uniformity make cutting and threading easier, an important source of installation economy.

Availability

Manufactured by the Electric Resistance Welded (ERW) process, GALVITE conduit is processed from high-quality domestic coils of flat rolled steels. It is produced in the nominal sizes and weights listed on the reverse side, and is furnished in 10′ lengths with a coupling on one end.

GALVITE is supplied with color-coded end caps for easier size identification and thread protection.

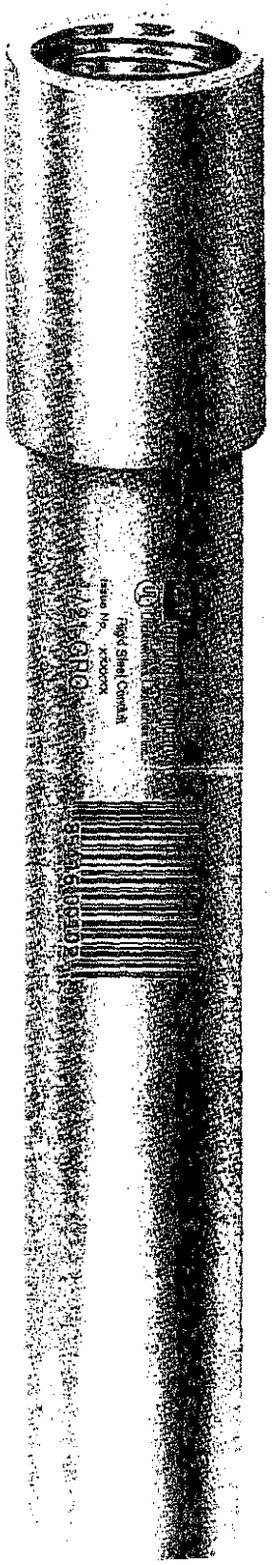
Quality

LTV Steel's Integrated Process Control system ensures GALVITE and other products meet the highest standards for quality and consistency. Continuous monitoring and the use of statistical process controls minimize variability throughout processing and allow for constant evaluation of product and process for refinement and improvement.

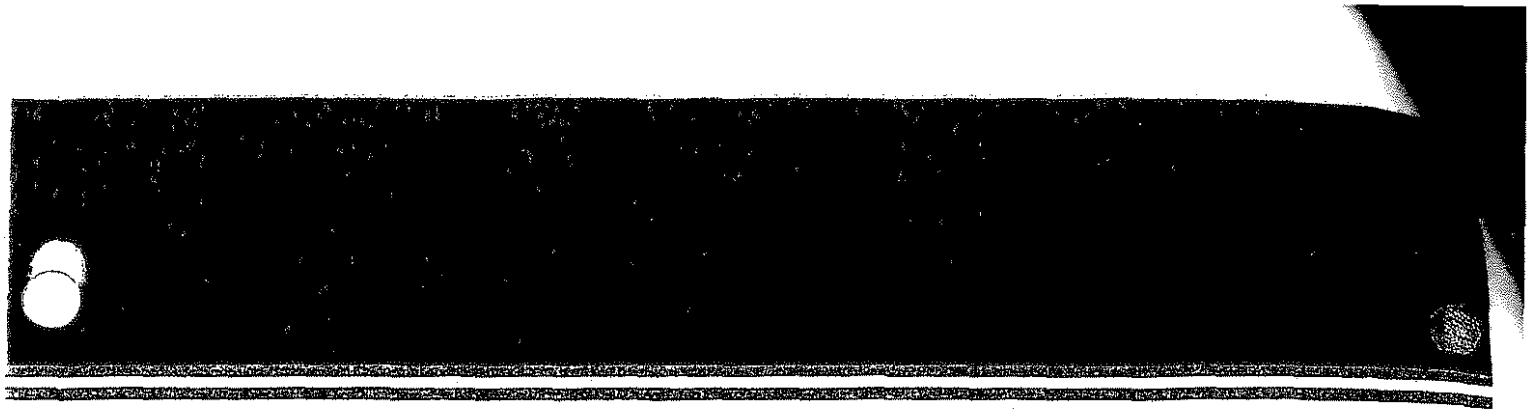
GALVITE is tested and inspected during manufacture for conformance to UL-6 and ANSI Specification C80.1.

Technical support

LTV Steel Tubular Products Company offers expert technical support to conduit customers. For information or assistance, write to the address listed on the reverse side.



GALVITE® Rigid Steel Conduit



GALVITE® RIGID STEEL CONDUIT – Dimensions and Weights

The values stated in feet/pound units are to be the standard. The metrical equivalents may be approximate.

TRADE SIZE DESIGNATOR		OUTSIDE DIAMETER		NOMINAL INSIDE DIAMETER		NOMINAL WEIGHT PER 100 FEET		FEET PER BUNDLE	STANDARD LIFTS LENGTH		WEIGHT		THREADS PER IN
U.S.	METRIC	IN	MM	IN	MM	LBS	KG		FEET	M	LBS	KG	
½	16	.840	21.34	.622	15.80	82	37.2	100	2500	762.5	2050	929.7	14
¾	21	1.050	26.67	.824	20.93	109	49.4	50	2000	610.0	2180	988.7	14
1	27	1.315	33.40	1.049	26.64	161	73.0	50	1250	381.3	2013	912.9	11.5
1¼	35	1.660	42.16	1.380	35.05	218	98.9	–	900	274.5	1962	889.8	11.5
1½	41	1.900	48.26	1.610	40.89	263	119.3	–	800	244.0	2104	954.2	11.5
2	53	2.375	60.33	2.067	52.50	350	158.7	–	600	183.0	2100	952.4	11.5
2½	63	2.875	73.03	2.469	62.71	559	235.5	–	370	112.9	2068	937.9	8
3	78	3.500	88.90	3.068	77.93	727	329.7	–	300	91.5	2181	989.1	8
3½	91	4.000	101.60	3.548	90.12	880	399.1	–	250	76.3	2200	997.7	8
4	103	4.500	114.30	4.026	102.26	1030	467.1	–	200	61.0	2060	934.2	8
5	129	5.563	141.30	5.047	128.19	1400	634.9	–	150	45.8	2100	952.4	8
6	155	6.625	168.28	6.065	154.05	1840	834.5	–	100	30.5	1840	834.5	8

Conduit is furnished in nominal 10' lengths with both ends threaded. Applicable length tolerance: length = ¼" (± 6.35 mm) – without coupling. A coupling is screwed on one end and a thread protector is on the other. Conduit is always identified by its English or Metric Trade Size Designator. All dimensions and weights shown above are nominal.

OUTSIDE DIAMETER

For trade sizes through 2"	±0.015" (±0.38 mm)
For trade sizes 2½" through 4"	±0.025" (±0.64 mm)
For trade sizes 5" and 6"	± 1%

GALVITE Conduit (Color Code – End Caps by Size)

Product	Size(s)	Color Code
GALVITE Rigid Conduit	¼" sizes	Red
	½" sizes	Black
	1" sizes	Blue

Quality Guarantee

If at any time within one year of the shipment date from an LTV Tubing facility, you are not satisfied with the quality of electrical conduit products purchased from LTV Tubular Products, we will promptly replace the material – free of charge. This guarantee applies to all electrical conduit products except where environmental conditions preclude one year of service life.

MADE WITH PRIDE IN THE U.S.A.

THE QUALITY INCH MARKED® EMT
GUIDE-LINED® SILVERSLICK® KNURLED INSIDE

Steel Tubular Products
Tubular Products Company
P.O. Box 1000
1315 Albert Street
Youngstown, OH 44501-1000

TUP 100Rc 3/98 5M WP

ENGINEERING SPECIFICATIONS:

Standards: Underwriters Laboratories Standard UL-83, UL-1063, UL-758.
Federal Specification A-A-59544
New York State DOS 16120-87-1222-1048
ASTM Class B Stranding AWM Spec 1316, 1317, 1318, 1319, 1320, 1321
Canadian Standards Association C22.2 No. 75
NEMA WC5/ICEA S-61-402

Packaging: 14 and 12 AWG — 4 x 500' spools, 2,000' per carton or 2,500' reels. 10 AWG — 2 x 500' spools, 1,000' per carton or 2,500' reel. 8 AWG — 500' carton, 1,000', 2,500', or 5,000' reel. 6 AWG — 500', 1,000', 2,500', or 5,000' reel. 4 AWG through 1000 KCMIL — 500', 1,000', or longer lengths on reels.

Application:

Encore Type THHN-THWN-2 building wire is intended for general purpose applications as defined by the National Electrical Code (NEC). Suitable for new construction or rewiring for 600-volt applications. When used as type THHN or THWN-2, conductor is suitable for use in wet or dry locations at temperatures not to exceed 90°C, or not to exceed 75°C in oil or coolants. When used as type MTW, conductor is suitable for use in dry locations at 90°C, or not to exceed 60°C in wet locations or where exposed to oils or coolants. When used as type AWM temperatures should not exceed 105°C in dry locations.

Size AWG Size	No. of Strands	Insulation Thickness PVC (mils)	Nylon Jacket Thickness (mils)	Approx. Outside Diameter (inches)	Allowable Ampacities 60° C	75° C	90° C	Approx. Shipping Lbs./M.Ft.
14	Solid	15	4	0.102	15	15	15	17
12	Solid	15	4	0.118	20	20	20	25
10	Solid	20	4	0.150	30	30	30	39
14	19	15	4	0.110	15	15	15	18
12	19	15	4	0.128	20	20	20	27
10	19	20	4	0.161	30	30	30	40
8	19	30	5	0.212	40	50	55	69
6	19	30	5	0.250	55	65	75	109
4	19	40	6	0.318	70	85	95	166
3	19	40	6	0.345	85	100	110	202
2	19	40	6	0.375	95	115	130	254
1	19	50	7	0.430	110	130	150	316
1/0	19	50	7	0.470	125	150	170	398
2/0	19	50	7	0.515	145	175	195	488
3/0	19	50	7	0.565	165	200	225	603
4/0	19	50	7	0.620	195	230	260	731
250	37	60	8	0.730	215	255	290	903
300	37	60	8	0.780	240	285	320	1058
350	37	60	8	0.830	260	310	350	1211
400	37	60	8	0.880	280	335	380	1332
500	37	60	8	0.970	320	380	430	1735
600	61	70	9	1.060	355	420	475	1990
750	61	70	9	1.170	400	475	535	2468
[illegible]00	61	70	9	1.300	455	545	615	3263

Ampacity shown above is per the 2002 National Electrical Code.
The above data is approximate and subject to normal manufacturing tolerances.

LISTED
SOLID E-123774
STRANDED E-156879

Construction:

Conductors:
Solid conductors, uncoated copper, per ASTM B3.
Stranded conductors uncoated copper per ASTM B3, ASTM B787and ASTM B8.

Conductors Insulation:
Color-coded, Polyvinyl chloride (PVC), heat- and Moisture-resistant, flame-retardant compound per UL-83 and UL-1063.

Jacket:
A tough, polyamide, outer-nylon covering per UL-83 and UL-1063.

Features:
Slick, outer-nylon jacket for easy pulling. VW-1 rated 14 AWG - 1 AWG, 1/0 AWG and larger is rated for CT use. 6 AWG and larger is rated for Sunlight Resistance in all colors. All sizes are rated "Gasoline and Oil Resistant II."

Print Legend:

Conductor Sizes 14 AWG through 10 Awg Solid:
E123774 (SIZE) AWG TYPE THHN OR THWN-2 GASOLINE AND OIL RESISTANT II VW-1 600V (UL) OR AWM OR C-(UL) TYPE T90 NYLON OR TWN 75 FT1

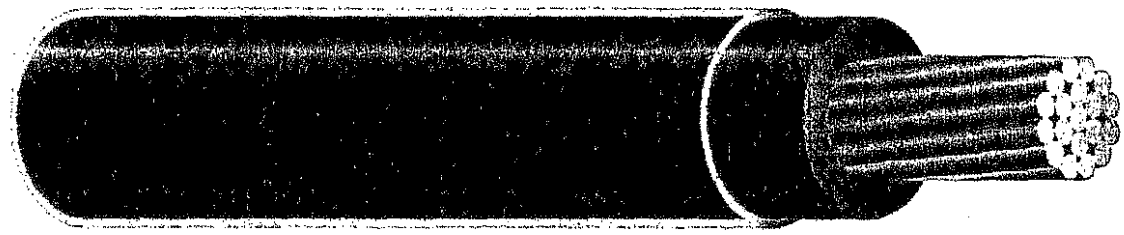
Conductor Sizes 14 AWG through 1 AWG Stranded:
E156879 (SIZE) AWG TYPE MTW OR THHN OR THWN-2 GASOLINE AND OIL RESISTANT II VW-1 600V (UL) OR AWM OR C-(UL) TYPE T90 NYLON OR TWN 75 FT1 DATE/TIME/OPER

Conductor Sizes 1/0 AWG - 500 KCMIL Stranded:
E156879 (SIZE) AWG OR KCMIL TYPE MTW OR THHN OR THWN-2 GASOLINE AND OIL RESISTANT II SUNLIGHT RESISTANT FOR CT USE 600V (UL) OR C-(UL) TYPE T90 NYLON OR TWN 75 FT1 DATE/TIME/OPER

Conductor Sizes 500 KCMIL - 1000 KCMIL Stranded:
E156879 (SIZE) KCMIL TYPE MTW OR THHN OR THWN-2 GASOLINE AND OIL RESISTANT II SUNLIGHT RESISTANT FOR CT USE 600V (UL) DATE/TIME/OPER

THHN

600 Volts. Copper Conductor. Thermoplastic Insulation/Nylon Sheath
Heat, Moisture, Oil, and Gasoline Resistant [1]
Sizes 8 AWG and Larger Rated THWN-2. All Stranded Sizes Rated MTW
Sizes 14 Through 6 AWG Rated AWM (105 °C)
Sizes 14 Through 1 AWG Rated VW-1. Size 1/0 AWG and Larger Listed for CT Use
Black Size 2 AWG and Larger Listed Sunlight Resistant



APPLICATIONS

Southwire Type THHN or THWN-2* conductors are primarily used in conduit and cable trays for services, feeders, and branch circuits in commercial or industrial applications as specified in the National Electrical Code [2]. When used as Type THHN, conductor is suitable for use in dry locations at temperatures not to exceed 90 °C. When used as Type THWN-2*, conductor is suitable for use in wet or dry locations at temperatures not to exceed 90 °C or not to exceed 75 °C when exposed to oil or coolant. When used as Type MTW, conductor is suitable for use in wet locations or when exposed to oil or coolant at temperatures not to exceed 60 °C or dry locations at temperatures not to exceed 90 °C (with ampacity limited to that for 75 °C conductor temperature per NFPA 79). Conductor temperatures not to exceed 105 °C in dry locations when rated AWM and used as appliance wiring material. Voltage for all applications is 600 volts.

SPECIFICATIONS

Southwire Type THHN or THWN-2* or MTW (also AWM) meets or exceeds all applicable ASTM specifications, UL Standard 83, UL Standard 1063 (MTW), Federal Specification A-A-59544, and requirements of the National Electrical Code.

CONSTRUCTION

Southwire Type THHN or THWN-2* or MTW copper conductors are annealed (soft) copper, insulated with a tough heat and moisture resistant polyvinyl chloride (PVC), over which a nylon (polyamide) or UL-listed equal jacket is applied. Available in black, white, red, blue, green, yellow, brown, orange, and gray. Some colors standard, some subject to economic order quantity. Sizes 1 AWG through 1,000 kcmil available in black only. Conductor sizes 2 AWG and larger listed and marked sunlight resistant in black only

[1] Oil and gasoline resistant II as defined by Underwriters Laboratories.
[2] 2002 Edition.
*rated -2 for 8 AWG and larger only.

Southwire
One Southwire Drive
Carrollton, Ga. 30119 USA

MADE IN THE USA

WEST COAST AIR PRODUCTS, INC.

Manufacturer's Representatives of HVAC products and services

SUBMITTAL DATA
for
Indeeco Unit Heater

Project:	McCormack & Baxter	Date:	3/29/05
		Revision No.:	
Architect:		Submitted for	Approval
Engineer:		Submitted by	Neil Watt
Contractor:	Amphere Electric	WCAP Job:	05082

1. The product description for specification conformance is shown below. For dimensions and quantities, see attached Product List.
2. It is the contractor's responsibility to verify all sizes prior to ordering equipment. Sizes submitted are based on contract documents and must be verified against field conditions.
3. Unless otherwise noted, this data is submitted for approval by the authorized party. Orders released for production prior to receipt of such approval are the responsibility of the customer for conformance to specification and dimensional requirements. Any changes made to orders placed without approval may be subject to additional costs.

Tag	Qty	Description	Size	Reference
	2	Indeeco Unit Heaters, UH Series	See attached	Indeeco
		Provided with the following features:		90-3025-83
		▪ Built-in load carrying single pole thermostat		
		Accessories (ship loose):		
		Wall or Ceiling bracket (See Note 1)		

NOTE: 1. Contractor to verify whether ceiling or wall mounted bracket is required.

PO Box 42309
Portland, OR 97242-0309

tel: (503) 786-1412
fax: (503) 786-1413

kW	Volts	Phase[2]	Total Amps[1]	CFM	Approx. Air Temp Rise °F(°C)	Catalog Number	Installed Weight (Lbs)
3	208	1	14	350	27 (15)	239-U103C[3]	15
	240	1	13	350	27 (15)	239-U103J[3]	15
	277	1	11	350	27 (15)	239-U103N[3]	15
	208	3	8	350	27 (15)	239-U103D	15
	240	3	7	350	27 (15)	239-U103K	15
	480	3	4	350	27 (15)	239-U103U	15
5	208	1	24	350	46 (26)	239-U105C[3]	15
	240	1	21	350	46 (26)	239-U105J[3]	15
	277	1	18	350	46 (26)	239-U105N[3]	15
	208	3	14	350	46 (26)	239-U105D	15
	240	3	12	350	46 (26)	239-U105K	15
	480	3	6	350	46 (26)	239-U105U	15
7.5	208	1	36	650	37 (21)	239-U207C	25
	240	1	31	650	37 (21)	239-U207J	25
	277	1	27	650	37 (21)	239-U207N	25
	208	3	21	650	37 (21)	239-U207D	25
	240	3	18	650	37 (21)	239-U207K	25
	480	3	9	650	37 (21)	239-U207U	25
10	208	1	48	650	49 (27)	239-U210C	25
	240	1	42	650	49 (27)	239-U210J	25
	277	1	36	650	49 (27)	239-U210N	25
	208	3	28	650	49 (27)	239-U210D	25
	240	3	24	650	49 (27)	239-U210K	25
	480	3	12	650	49 (27)	239-U210U	25

Notes:

(1) Total load includes fractional motor load.

(2) All three-phase heaters have balanced loads.

(3) All standard heaters are supplied with built-in 24 Volt transformer and contactor except the six items designated[3].

(4) Heaters must be ordered with either wall or ceiling mounting bracket.

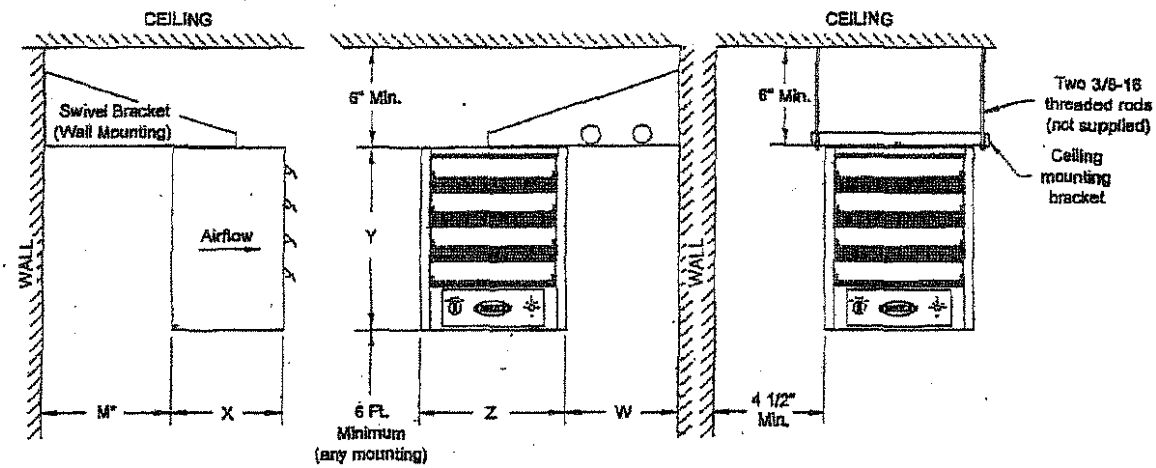
Factory Built-In Options

Code	Description
D	Power disconnect switch.
M	Manual reset thermal cutout (in additional to automatic reset cutout).
P	"Heater On" pilot light.
R	Relay required for remote three-position selector switch
R2	Built-in 24 Volt transformer and magnetic contactor for 3 & 5 kW; single phase heaters at 208, 240 or 277 Volts.
T5	Load-carrying single pole thermostat.
U	Three-position selector switch (Heater-Standby-Fan).
X	120 Volt transformer to replace 24 Volt transformer.

Accessories

Part Number	Description
1018799	Wall mounting bracket.
1020172	Ceiling mounting bracket.
1020173	Remote three-position selector switch. (Heater-Standby-Fan)*
1007014	Load-carrying wall mounted thermostat.
1006998	Low voltage (24VAC) wall mounted thermostat.

See Catalog C90, Page 23 for selection of remote mounted thermostats.
*Options R2 & R are required for 3 & 5 kW; 208, 240 & 277 Volt single phase heaters.
Option R required for all heaters.

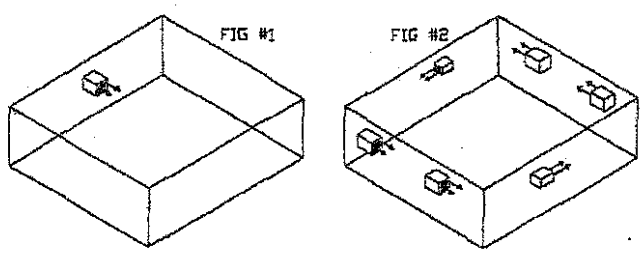


KW Ratings	Dimensions - Inches (cm)					Weight Lbs (kgs)	Max. Air Throw Feet (m)
	M*	W	X	Y	Z		
3-5	11 (27.94)	9 (22.86)	9 (22.86)	14 1/2 (36.83)	12 (30.48)	15 (6.8)	15 (4.6)
7.5-10	11 (27.94)	8 (20.32)	11 (27.94)	19 1/2 (49.53)	14 1/2 (36.83)	25 (11.34)	18 (5.5)

* Minimum inlet clearance required for any mounting position.

Application

Small rooms may only require one unit heater (FIG #1) while other may require multiple unit heaters for proper perimeter circulation (FIG #2).



CASCADE AIR EQUIPMENT

MANUFACTURERS AGENT
10220 SW Nimbus Ave., Suite K11
Portland, OR 97223

PHONE: 503-639-3820 FAX: 503-639-9814
WEB SITE: www.cascadeairequipment.com

March 29, 2005

Amper Electric
Attn: Jackie
7500 SE Division St.
Portland, OR 97206

Project: McCormick and Baxter

We propose to furnish the following material for the project listed above:

ACME Engineering & Manufacturing

Fan Model	Motor	Notes
FQ10 8 HI	115v/1/60 TEAO	Includes Back Guard, Speed Control

Safe Air/Dowco

Model	Motor	Notes
Safe Air Damper 611	115v/1/60	Intake/Exhaust
Dowco Louver DWF-04	N/A	Intake/Exhaust

CONSTRUCTION FEATURES

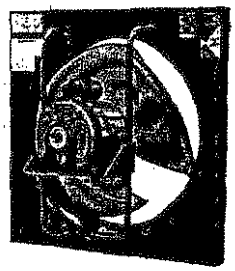
FAN PANEL - Construction of heavy gauge steel. Wide flange on all four sides provides extra strength and rigidity to reduce the possibility of vibration and for a more secure installation. Standard finish is acrylic epoxy.

STREAMLINED ORIFICE - Die formed for uniformity, the deep streamlined orifice provides for high efficiency airflow throughout the propeller.

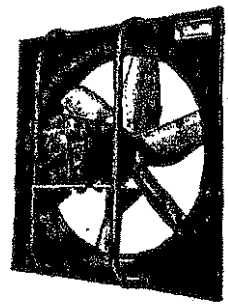
EASY TO INSTALL - Prepunched holes in flange saves on installation time and cost.

MOUNT IN ANY POSITION - All motors are equipped with all-angle thrust ball bearings.

FQ09 AND 10

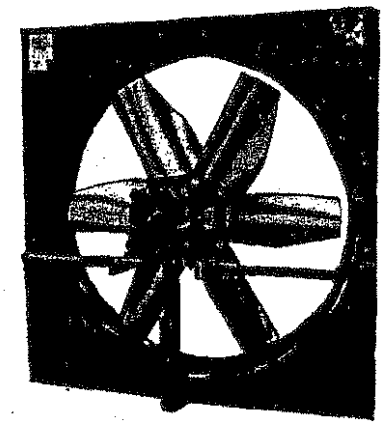


FQ12 THRU 18



FN14 THRU 18

FQ21 THRU 36



FN21 THRU 48

EXHAUST MODELS FQ09 and 10 utilize the rugged motor side wire guard as the motor support means thereby making this guard standard equipment. Front (propeller side) guard is optional. **FQ09 and FQ10 are not available in reverse flow (supply).**

EXHAUST MODELS FQ12 to 36 have the motor mounted on an all welded steel plate and formed pipe frame assembly for extra strength and rigidity. Front and back guards are optional on these sizes. **FQ1210 and FQ129 are not available in reverse flow (supply).**

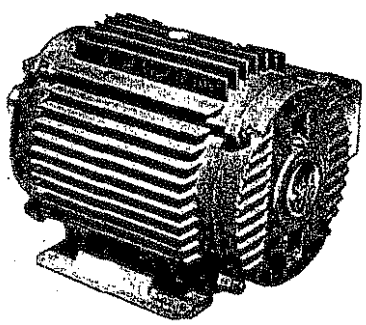
EXHAUST MODELS FN14 to 48 have the motor mounted on an all welded steel plate and formed pipe frame assembly for extra strength and rigidity. Front and back guards are optional on all sizes.

REVERSE FLOW (SUPPLY) FANS

Supply fans are available in all models except FQ09, 10, 1210 and 129. The airflow capacity is the same as for exhaust type fans as shown on page 4.

Only circular basket type guards are available with these fans.

When supply type fans are used with motorized wall dampers, it is recommended to use WAGC and WAGCH center pivot dampers. A time delay is recommended in the fan motor's starter control circuit to allow the damper to fully open before the fan is activated.



RESERVE MOTOR POWER - Fans are designed with conservative motor loadings and efficient motor cooling to obtain longer motor life under continuous duty operation.

All motors are totally enclosed type with lubricated sealed ball bearings. All single phase motors have automatic resetting thermal overloads for low voltage protection.

Models FQ09, 10, 1210 & 129 use two speed tapped winding, single phase, shaded pole type ball bearing motors only.

All other models have split phase, capacitor start, capacitor run, or permanent split capacitor single phase motors. Some are available in two speed types.

Explosion resistant and three phase single speed motors are also available for some models. Consult your Acme Representative for more details plus availability of motors.

Single phase motors are resilient mounted in circular neoprene vibration isolators integral with the motor base.

DIMENSIONAL DATA

EXHAUST FANS

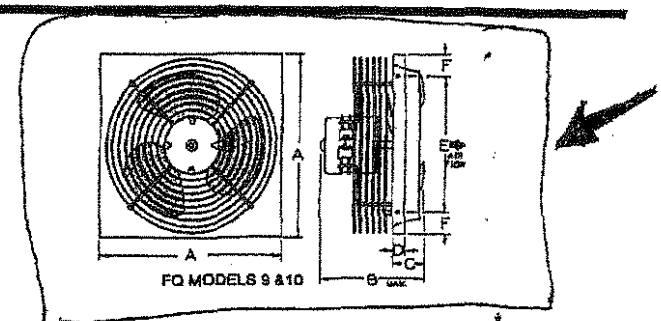
FAN MODEL	A	B Max.	C	D	E*	F	Metal Gauges	
							Orifice	Blades
	in.	in.	in.	in.	in.	in.	Ga.	in.
FQ09	12.00	5.75	1.50	1.50	8.00	2.00	18	.050
FQ10	14.00	7.00	3.00	1.50	10.00	2.00	18	.050
FQ12	16.00	13.25	4.00	1.50	10.00	3.00	18	.063
FQ14	18.00	15.00	4.50	1.50	10.00	4.00	18	.080
FN14	18.00	13.87	3.75	1.50	10.00	4.00	18	.080
FQ16	21.00	15.50	5.00	1.50	8.00	2.50	18	.080
FN16	21.00	18.76	4.00	1.50	8.00	2.50	18	.080
FQ18	23.00	18.00	5.50	1.50	9.00	2.50	18	.080
FN18	23.00	19.82	4.50	1.50	9.00	2.50	16	.080
FQ21	26.50	17.50	6.00	1.75	10.00	3.25	16	.080
FN21	26.50	17.71	5.00	1.75	10.00	3.25	16	.080
FQ24	30.00	20.00	6.50	1.75	8.00	3.00	16	.080
FN24	30.00	17.78	6.00	1.75	8.00	3.00	16	.125
FQ30	37.50	25.25	7.50	1.75	10.00	3.75	16	.125
FN30	37.50	20.13	8.00	1.75	10.00	3.75	16	.125
FQ36	45.00	24.75	8.00	1.75	12.00	4.50	16	.125
FN36	45.00	21.38	9.00	1.75	12.00	4.50	16	.125
FN42	60.00	18.62	6.87	3.06	15.00	7.50	14	.125
FN48	64.00	21.00	7.50	3.06	16.00	8.00	14	.125

SUPPLY FANS

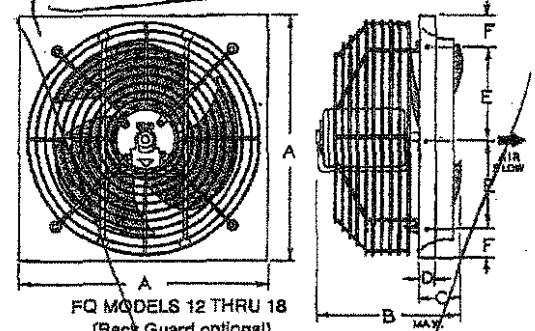
FAN MODEL	A	B Max.	C	D	E*	F	Metal Gauges	
							Orifice	Blades
	in.	in.	in.	in.	in.	in.	Ga.	in.
FQ-R12	16.00	14.75	2.50	1.50	10.00	3.00	18	.063
FQ-R14	18.00	16.75	3.25	1.50	10.00	4.00	18	.080
FN-R14	18.00	13.50	3.50	1.50	10.00	4.00	18	.080
FQ-R16	21.00	20.00	4.50	1.50	8.00	2.50	18	.080
FN-R16	21.00	17.00	1.50	1.50	8.00	2.50	16	.080
FQ-R18	23.00	21.75	4.00	1.50	9.00	2.50	18	.080
FN-R18	23.00	19.00	1.50	1.50	9.00	2.50	16	.080
FQ-R21	26.50	22.00	2.75	1.75	10.00	3.25	16	.080
FN-R21	26.50	22.00	1.75	1.75	10.00	3.25	16	.080
FQ-R24	30.00	21.00	1.50	1.75	8.00	3.00	16	.080
FN-R24	30.00	25.00	1.75	1.75	8.00	3.00	16	.125
FQ-R30	37.50	27.09	4.50	1.75	10.00	3.75	16	.125
FN-R30	37.50	25.50	1.75	1.75	10.00	3.75	16	.125
FQ-R36	45.00	25.25	5.00	1.75	12.00	4.50	16	.125
FN-R36	45.00	30.00	1.75	1.75	12.00	4.50	16	.125
FN-R42	60.00	30.50	2.00	3.06	15.00	7.50	14	.125
FN-R48	64.00	32.25	2.50	3.06	16.00	8.00	14	.125

***The number of holes varies depending on fan size. FQ09 thru FN14 - 2 Holes, FQ16 thru FN21 - 3 Holes, FQ24 thru FN48 - 4 Holes.**

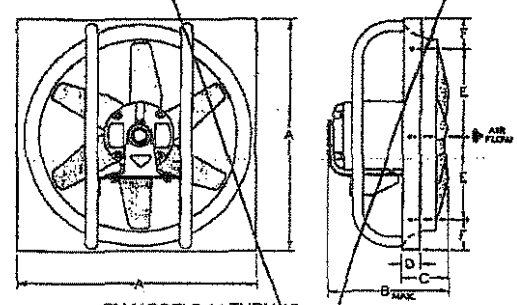
Typical drawings for dimensional purposes only, which are correct within limits suitable for normal installation requirements and do not necessarily show actual construction.



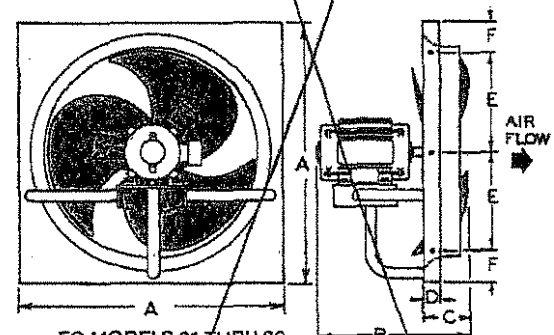
FQ MODELS 9 & 10



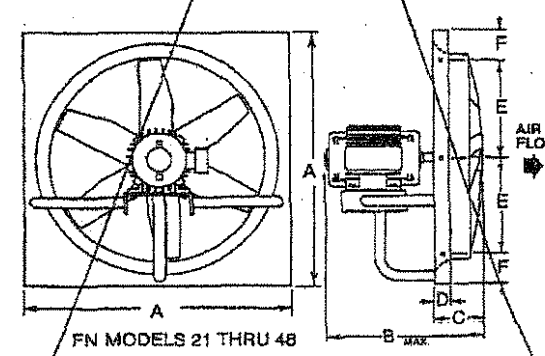
FQ MODELS 12 THRU 18
(Back Guard optional)



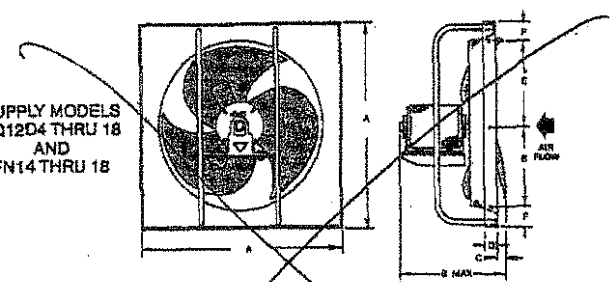
FN MODELS 14 THRU 18



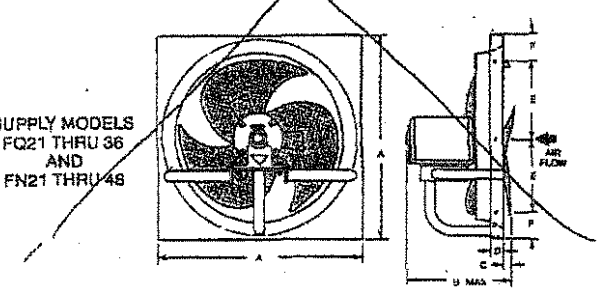
FQ MODELS 21 THRU 36



FN MODELS 21 THRU 48



SUPPLY MODELS
FQ12D4 THRU 18
AND
FN14 THRU 18



SUPPLY MODELS
FQ21 THRU 36
AND
FN21 THRU 48

B On and Off-Site Material Test Results

Carlson Testing, Inc.

Construction Inspection & Related Test[illegible]
Geotechnical Consultin[illegible]

Main Office
P.O. Box 23814
Tigard, Oregon 97281
Phone (503) 684-3460
FAX (503) 684-0954

Salem Office
4060 Hudson Ave., NE
Salem, OR 97301
Phone (503) 589-1252
FAX (503) 589-1309

Bend Office
P.O. Box 7918
Bend, OR 97708
Phone (541) 330-915[illegible]
FAX (541) 330-9163

JOB NO. 7050744[illegible]

REPORT OF IN-PLACE DENSITY TESTS

Client ~~McCormack & Baxter~~ Wilder

Project 6900 N Edgewater McCormack + Baxter

Material Description 3/4" 0 recycled concrete / MBI - Argyll Quarry

Max. Dry Density 130.3 lbs./cu. ft. Optimum Moisture 11.6 %. Serial # ____

Method of Test D-1557 Required Compaction: 95 %

Source of Proctor Value: ☒ Project Specific, Date: 4/05 ☐ Supplied By Client ☐ Current Fill Source Proctor

DATE OF TEST	TEST NO.	CODE	TEST LOCATION	DENSITY COUNT	MOIST. COUNT	MODE	DEPTH	ELEV. FT.	% FIELD MOIST.	IN-PLACE DENSITY (LBS/C U. Ft.) WET	DRY	% COMP.
4/20/05	1	SF	SE corner area of Parking Lot	924	135	DT	8"	0"	7.9	135.5	125.7	96.4
	2	SF	SW corner area of Parking Lot	848	749	DT	8"	0	8.7	137.0	126.0	96.7
	3	SF	Center of building pad at NE corner of parking lot	812	201	DT	8	0	12.1	140.5	125.3	96.2

Standard Counts - Density: 2319 Moisture: 648 Calibration Data: 02/05

Remarks: - 0' - finished grade (1L) - left copies of report on site. - observed some pumping of material

Tested by [signature]

CARLSON TESTING INC.

Carlson Testing, Inc.

Main Office
P.O. Box 23814
Tigard, Oregon 97281
Phone (503) 684-3460
Fax (503) 684-0954

Salem Office
4060 Hudson Ave., NE
Salem, OR 97301
Phone (503) 589-1252
Fax (503) 589-1309

Bend Office
P.O. Box 7918
Bend, OR 97708
Phone (541) 330-9155
Fax (541) 330-9163

Special Inspection

DAILY FIELD REPORT

Project: McCORMACK + BAXTER

Date: 4-13-05

Job Address: 6900 N. EDGEWATER

CTI Job No. N014660'2

Permit No.: SUPERFUND SITE NOT REQ'D

Type of Inspection: REBAR - CONC

Field ☑ or Fab Shop ____

Weather: OVERCAST

Inspection Notes (include location, testing data, substitutions/deviations, materials and methods of construction, non-conforming items, acceptance criteria, corrected non-conforming items, etc.):

AT THE REQUEST OF MIKE @ WALDER, INSPECTED REBAR FOR SIX FOOTINGS AND PIERS. OBSERVED PLACEMENT OF ROSS ISLAND MIX # MBVR3016, 30 MPA 4000 PSI CONCRETE W/AIR TO SAME LOCATION. ONE SET OF TEST CYLINDERS CAST W/SLUMP 4", AIR 4 %, TEMP 61°, AMBIENT 50°F.

*** CHECK ONE BOX ONLY ***

	YES	NO
1. This is a preliminary inspection only. – OR –	☒	
2. The work inspected conforms to acceptance criteria listed above. If "No," the portions of the work that are non-conforming items are clearly stated above and will be added to the NCL. Remaining portions of the work, which are not preliminary in nature, are to be considered as conforming.	☑	☐

Inspector: [signature]

Certification No.: COP 657

Carlson Testing, Inc.

Construction Inspection & Related Tests
Geotechnical Consulting

Main Office
P.O. Box 23814 • Tigard, Oregon 97281
Phone (503) 684-3460 • FAX (503) 684-0954

Salem Office
4060 Hudson Ave., NE • Salem, OR 97301
Phone (503) 589-1252 • FAX (503) 589-1309

Bend Office
P.O. Box 7918 • Bend, OR 97708
Phone (541) 330-9155 • FAX (541) 330-9163

REPORT OF 4- 6x12 TEST SPECIMENS

Test Methods: T72, T23, T064

Date Molded: 4-13, 20___ Job No. N0146606 Permit No: SUPERFUND SITE NOT REQ'D

Client: _____

Project: MCCORMACK + BAXTER

Address: 6900 N EDGEWATER Jurisdiction: _____

Contractor: WILDER Sub Contractor: _____

Concrete Supplier: ROSS ISLAND Truck #: 78 Load # 1 Ticket #: T342631

Weather: OVERCAST Air Temp. at Sampling Time: 50 Test Time: 1100

Cylinders were cast for the following location: _____

Total Concrete Placement Location: 6 FOOTINGS & PIERS

Strength Req'd 4000 -PSI @ 28 Days - Conc. Temp. 60 - % Air: 4½ Slump: 4 - Cement Type: _____

Mix Number: 4BUR3010 Admix/Amount: _____

Set No.	Test @ Days	Register Number	Date Rec'd	Date Test	Total Load	Area	Unit PSI	Corrected PSI	Tested By
	7 3								
	7								
	28								
	28								
	H								

Remarks: DON W/BEDFORD CONST. WILL CALL 9:00AM FOR RESULTS

Cast by: K. FARRAH Reviewed by: _____

Received
5-2-05

Carlson Testing, Inc.

Main Office
P.O. Box 23814
Tigard, Oregon 97281
Phone (503) 684-3460
Fax (503) 684-0954

Salem Office
4060 Hudson Ave., NE
Salem, OR 97301
Phone (503) 589-1252
Fax (503) 589-1309

Bend Office
P.O. Box 7918
Bend, OR 97708
Phone (541) 330-9155
Fax (541) 330-9163

Special Inspection

DAILY FIELD REPORT

Project: McCormack & Baxter Crosstie — Date: May 2, 2005

Job Address: 6900 N Edgewater — CTI Job No. T0507949

Permit No.: N/A — Type of Inspection: Rebar, concrete

Field ☒ or Fab Shop ☐ — Weather: Overcast

Inspection Notes (include location, testing data, substitutions/deviations, materials and methods of construction, non-conforming items, acceptance criteria, corrected non-conforming items, etc.):

Noted Rebar for monolithic slab on grade conformed to the approved plans. Ross Island mix above 30" was placed in pans and vibrated. (Shop Bldg Floor slab) 1 set of 3 cylinders were cast.

Noted ~~water~~ Pedestal construction called Ross Island and verified the mix was 4000 psi. Phone call response was yes, this is 4000 psi mix

*** CHECK ONE BOX ONLY ***	YES	NO
1. This is a preliminary inspection only. – OR –	☐	
2. The work inspected conforms to acceptance criteria listed above. If "No," the portions of the work that are non-conforming items are clearly stated above and will be added to the NCL. Remaining portions of the work, which are not preliminary in nature, are to be considered as conforming.	☒	☐

Inspector: Lawrence Warfield — Certification No.: 601

Carlson Testing, Inc.

Received 5-2-05

Construction Inspection & Related Tests
Geotechnical Consulting

Main Office
P.O. Box 23814 • Tigard, Oregon 97281
Phone (503) 684-3460 • FAX (503) 684-0954

Salem Office
4060 Hudson Ave., NE • Salem, OR 97301
Phone (503) 589-1252 • FAX (503) 589-1309

Bend Office
P.O. Box 7918 • Bend, OR 97708
Phone (541) 330-9155 • FAX (541) 330-9163

REPORT OF 6x12 cylinder TEST SPECIMENS

Test Methods:

Date Molded: MAY 2, 2005 Job No. T0507749 Permit No: N/A

Client:

Project: McCormack & Baxter Creosote

Address: Jurisdiction: Ptld

Contractor: Sub Contractor:

Concrete Supplier: Ross Island Truck #: 90 Load # 2 Ticket #: A-343744

Weather: overcast Air Temp. at Sampling Time: 60 Test Time: 10:45

Cylinders were cast for the following location: slab on grade NE corner of Bldg

Total Concrete Placement Location:

Strength Req'd 4000 -PSI @ 28 Days - Conc. Temp. 66° - % Air: 6.0 - Slump: 6 - Cement Type:

Mix Number: WI 80IR3010 - Admix/Amount:

Set No.	Test @ Days	Register Number	Date Rec'd	Date Test	Total Load	Area	Unit PSI	Corrected PSI	Tested By
	7								
	28								
	28								

Remarks:

Cast by: L. Warfield Reviewed by:

Carlson Testing, Inc.

P.O. Box 23814
Tigard, Oregon 97281
Phone (503) 684-3460
Fax (503) 684-0954

4060 Hudson Ave., NE
Salem, OR 97301
Phone (503) 589-1252
Fax (503) 589-1309

P.O. Box 7918
Bend, OR 97708
Phone (541) 330-9155
Fax (541) 330-9163

Special Inspection

DAILY FIELD REPORT

Project: McCormack + Baxter site

Date: 5-6-05

Job Address: 6920 N. Edgewater

CTI Job No.

Permit No.:

Type of Inspection: Rebar / Pour

Field ☒ or Fab Shop

Weather: Cloudy

Inspection Notes (include location, testing data, substitutions/deviations, materials and methods of construction, non-conforming items, acceptance criteria, corrected non-conforming items, etc.):

As requested C.T.I. Rep. inspected the rebar placement, size, laps, and grade for the Hazardous Waste Storage Area. Reinforcement conforms to Sheet 8 of 9 of the site plans, and verbal direction from the Design Engineer for slab-on-grade reinforcement of #5 @ 12" oc ew. C.T.I. Rep. observed the placement of a Ross ~~Island~~ concrete mix 3010 BUR; obtained one sample for field test and cast one set of (4) 6"x12" cylinders.

Note: C.T.I. Rep. spoke with the Job superintendent about removing the round steel stakes and the 2"x4" wooden stakes from the concrete. C.T.I. Rep. was told the stakes would be pulled and the voids filled with concrete.

*** CHECK ONE BOX ONLY ***	YES	NO
1. This is a preliminary inspection only. – OR –	☐	
2. The work inspected conforms to acceptance criteria listed above. If "No," the portions of the work that are non-conforming items are clearly stated above and will be added to the NCL. Remaining portions of the work, which are not preliminary in nature, are to be considered as conforming.	☒	☐

Inspector: Larry Wright

Certification No.: 641 C.O.P.

Carlson Testing, Inc.

Construction Inspection & Related Tests
Geotechnical Consulting

Main Office
P.O. Box 23814 • Tigard, Oregon 97281
Phone (503) 684-3460 • FAX (503) 684-0954

Salem Office
4060 Hudson Ave., NE • Salem, OR 97301
Phone (503) 589-1252 • FAX (503) 589-1309

Bend Office
P.O. Box 7918 • Bend, OR 97708
Phone (541) 330-9155 • FAX (541) 330-9163

REPORT OF (4) 6" x 12" TEST SPECIMENS

Test Methods: ASTM C-172, 143, 1064, 31, 231

Date Molded: 5-6, 20 05 Job No. _____ Permit No: _____

Client: _____

Project: McCormack + Baxter Site

Address: 6900 N. Edgewater Jurisdiction: _____

Contractor: Wilder & McCormack Sub Contractor: _____

Concrete Supplier: Ross Island Truck #: 80 Load # 2 Ticket #: V-344176

Weather: Cloudy Air Temp. at Sampling Time: _____ Test Time: 1345

Cylinders were cast for the following location: Hazardous Waste Storage Area

Total Concrete Placement Location: _____

Strength Req'd 4000 -PSI @ 28 Days - Conc. Temp. 77° - % Air: 4.8 - Slump: 4¼" - Cement Type: I/II

Mix Number: 3010BUK Admix/Amount: _____

Set No.	Test @ Days	Register Number	Date Rec'd	Date Test	Total Load	Area	Unit PSI	Corrected PSI	Tested By
1	7								
1	28								
1	28								
1	H								

Remarks:

Tested by: Casey Wright

Carlson Testing, Inc.

Main Office
P.O. Box 23814
Tigard, Oregon 97281
Phone (503) 684-3460
Fax (503) 684-0954

Salem Office
4060 Hudson Ave., NE
Salem, OR 97301
Phone (503) 589-1252
Fax (503) 589-1309

Bend Office
P.O. Box 7918
Bend, OR 97708
Phone (541) 330-9155
Fax (541) 330-9163

Special Inspection

DAILY FIELD REPORT

Project: McCormick + Baxter

Date: 5/12/05

Job Address: 6900 N Edgewater St

CTI Job No. T0507949

Permit No.: N/A

Type of Inspection: Rebar / Concrete

Field [X] or Fab Shop

Weather: Overcast

Inspection Notes (include location, testing data, substitutions/deviations, materials and methods of construction, non-conforming items, acceptance criteria, corrected non-conforming items, etc.):

Inspected rebar and the placement of 5 cu yds concrete (Ross STND MIX #MBUR 3010, 4000psi) @ light pole base and tree wash wall. All rebar inspected on this date was placed in compliance with the approved job plans + project specifications. One set of test samples were cast during placement.

*** **CHECK ONE BOX ONLY** ***

	YES	NO
1. This is a preliminary inspection only. —OR—	☐	
2. The work inspected conforms to acceptance criteria listed above. If "No," the portions of the work that are non-conforming items are clearly stated above and will be added to the NCL. Remaining portions of the work, which are not preliminary in nature, are to be considered as conforming.	☒	☐

Inspector: Steve [signature]

Certification No.: COP #662

ISLAND PREMIX CONCRETE

[illegible] S.E. MCLOUGHLIN BLVD.
PORTLAND, OREGON 97202
OFFICE 239-5504

PORTLAND 2[illegible]
VANCOUVER 694-1534

PROJECT ID [illegible] CUSTOMER NO. [illegible] JOB NO. [illegible] DATE [illegible]-2005

SOLD TO [illegible] CONSTRUCTION
5820 NE PORTLAND HWY
PORTLAND, OREGON
OR 97206

LOCATION/DIRECTION [illegible] N EDGEWATER ST
(135670)

ZONE [illegible]

ENVIRONMENTAL FEE ☐

TICKET NO. V - [illegible]
TIME WANTED [illegible]
TRUCK NO. 71
DRIVER JESSE ROBINSON
USE SLAB
TERMS 2%/10TH /NET[illegible]

LOAD QTY	TOTAL QTY	DESCRIPTION	PRICE	AMOUNT
6.88M3	20.64M3	MBVR3010 30MPA 3/4" MIX W/AIR		
9.00CY	27.00CY	MBVR3010 30MPA 3/4" MIX W/AIR		
1.00FEE		FUEL SURCHARGE - THIS DELIVERY		

SLUMP	LOAD NO.	QTY. ORDERED	NOTES: [illegible]	SUB TOTAL / SALES TAX / TOTAL
101. [illegible]	3	[illegible]		

LEFT PLANT [illegible] START UNLOAD [illegible] TIME ON JOB [illegible] EXCESS UNLOADING WATER ADDED BY CUSTOMER [illegible]

ARRIVED JOB [illegible] FINISH UNLOAD [illegible] TIME ALLOWANCE TIME WASHINGTON MILES

BY SIGNING BELOW, YOU ACKNOWLEDGE RECEIPT OF THE PRODUCTS IDENTIFIED ABOVE, AND AGREE TO THE SALE TERMS ON THE REVERSE SIDE.

NOT RESPONSIBLE FOR DAMAGES ON DELIVERY INSIDE CURB LINE

RECEIVED BY ____________ SIGN HERE

DELIVERY TICKET / CUSTOMER

*** CAUTION**
MAY CAUSE EYE OR SKIN INJURY
CONTAINS PORTLAND CEMENT
If any mixture gets into the eye, flush immediately and see a doctor. If any mixture gets onto the skin, wash promptly with water.
KEEP OUT OF REACH OF CHILDREN

Material	Moist %	Actual
3/4	0.5%	7334.37 KG
SND	5.0%	5297.93 KG
CMT	0.0%	2685.25 KG
VR	0.0%	2099.60 ML
30N	0.0%	7097.25 ML
C/W	0.0%	.00 L
R/W	0.0%	688.42 L

MAX ADD WAT = 208.19L (55GAL)
TEMPER WATER = .00L
WAT/CEM RATIO = 0.44

I HEREBY CERTIFY THAT THE AGGREGATES USED IN THIS CONCRETE ARE REPRESENTED BY SAMPLES TESTED AND APPROVED FOR THE OREGON DEPARTMENT OF TRANSPORTATION. OUR CEMENT SUPPLIER HAS CERTIFIED THAT THE CEMENT COMPLIES WITH A.S.T.M. SPECIFICATIONS OF THE OREGON DEPARTMENT OF TRANSPORTATION. THE PROPORTION OF ALL MATERIALS ARE IN ACCORDANCE WITH THE MIX DESIGNS FOR THE PROJECT.

ROSS ISLAND SAND & GRAVEL

BY ____________

ISLAND CONCRETE

4315 S.E. McLOUGHLIN BLVD
PORTLAND, OREGON 97202
OFFICE 239-5504

PORTLAND 239-5504
VANCOUVER 694-1534

PROJECT ID [illegible] CUSTOMER NO. [illegible] JOB NO. [illegible] DATE [illegible]

SOLD TO [illegible]
5820 NE PORTLAND HWY
PORTLAND, OREGON
OR 97218

LOCATION/DIRECTION [illegible]

ZONE [illegible]

ENVIRONMENTAL FEE ☐

TICKET NO. [illegible]
TIME WANTED [illegible]
TRUCK NO. [illegible]
DRIVER [illegible]
USE [illegible]
TERMS [illegible]

LOAD QTY	TOTAL QTY	DESCRIPTION	PRICE	AMOUNT
[illegible]	[illegible]	[illegible]		

SLUMP	LOAD NO.	QTY. ORDERED	NOTES:
[illegible]	[illegible]	[illegible]	

SUB TOTAL
SALES TAX
TOTAL

LEFT PLANT [illegible] START UNLOAD [illegible] TIME ON JOB [illegible] EXCESS UNLOADING [illegible] WATER ADDED BY CUSTOMER [illegible]

ARRIVED JOB [illegible] FINISH UNLOAD [illegible] TIME ALLOWANCE [illegible] TIME [illegible] WASHINGTON MILES [illegible]

BY SIGNING BELOW, YOU ACKNOWLEDGE RECEIPT OF THE PRODUCTS IDENTIFIED ABOVE, AND AGREE TO THE SALE TERMS ON THE REVERSE SIDE.

NOT RESPONSIBLE FOR DAMAGES ON DELIVERY INSIDE CURB LINE

RECEIVED BY _____ SIGN HERE

DELIVERY TICKET / CUSTOMER

*** CAUTION**

MAY CAUSE EYE OR SKIN INJURY
CONTAINS PORTLAND CEMENT

If any mixture gets into the eye, flush immediately and see a doctor. If any mixture gets onto the skin, wash promptly with water.

KEEP OUT OF REACH OF CHILDREN

Mat'l	Mass (Actual)	
[illegible]	[illegible]	[illegible]

MAX ADD WAT = [illegible]
TEMPER WATER = [illegible]
WAT/CEM RATIO = [illegible]

I HEREBY CERTIFY THAT THE AGGREGATES USED IN THIS CONCRETE ARE REPRESENTED BY SAMPLES TESTED AND APPROVED FOR THE OREGON DEPARTMENT OF TRANSPORTATION. OUR CEMENT SUPPLIER HAS CERTIFIED THAT THE CEMENT COMPLIES WITH A.S.T.M. SPECIFICATIONS OF THE OREGON DEPARTMENT OF TRANSPORTATION. THE PROPORTION OF ALL MATERIALS ARE IN ACCORDANCE WITH THE MIX DESIGNS FOR THE PROJECT.

ROSS ISLAND SAND & GRAVEL

BY _____

ROSS ISLAND CONCRETE — PREMIX — DURABLE — WORKABLE

4315 S.E. McLOUGHLIN BLVD.
PORTLAND, OREGON 97202
OFFICE 239-5504

PORTLAND 239-5500
VANCOUVER 694-1534

PROJECT ID [illegible] CUSTOMER NO [illegible] JOB NO [illegible] DATE 05-06-2005 12:14PM

SOLD TO BEDFORD CONSTRUCTION
5800 NE PORTLAND HWY
PORTLAND, OREGON
OR 97206

LOCATION/DIRECTION 11900 N EDGEWATER ST
(135670)

ZONE Pg. 565 & J-4

ENVIRONMENTAL FEE ☐

TICKET NO. V - 300175
TIME WANTED 12:30PM
TRUCK NO. 73
DRIVER TROY COCHRAN
USE SLAB
TERMS 2%/10TH /NET31ST

LOAD QTY	TOTAL QTY	DESCRIPTION	PRICE	AMOUNT
6.88M3	6.88M3	MBVR3010 30MPA 3/4" MIX W/AIR		
9.00CY	9.00CY	MBVR3010 30MPA 3/4" MIX W/AIR 3		
1.00FEE		FUEL SURCHARGE - THIS DELIVERY		

SLUMP	LOAD NO.	QTY. ORDERED	NOTES:	
101. C4.00	1	27.52	550W	SUB TOTAL SALES TAX TOTAL:

LEFT PLANT 12:25 START UNLOAD ______ TIME ON JOB ______ EXCESS UNLOADING ______ WATER ADDED BY CUSTOMER ______

ARRIVED JOB 12:40 FINISH UNLOAD ______ TIME ALLOWANCE ______ TIME ______ WASHINGTON MILES ______

*** CAUTION**

MAY CAUSE EYE OR SKIN INJURY
CONTAINS PORTLAND CEMENT

If any mixture gets into the eye, flush immediately and see a doctor. If any mixture gets onto the skin, wash promptly with water.

KEEP OUT OF REACH OF CHILDREN

BY SIGNING BELOW, YOU ACKNOWLEDGE RECEIPT OF THE PRODUCTS IDENTIFIED ABOVE, AND AGREE TO THE SALE TERMS ON THE REVERSE SIDE.

NOT RESPONSIBLE FOR DAMAGES ON DELIVERY INSIDE CURB LINE.

RECEIVED BY ______________________ SIGN HERE

DELIVERY TICKET / CUSTOMER

Mat'l	Moist	Actual
3/4	0.5%	7357.23 KG
SSD	5.0%	5297.93 KG
CMT	0.0%	2687.58 KG
VR	0.0%	2070.03 ML
20N	0.0%	7097.25 ML
C/W	0.0%	.00 L
R/W	0.0%	719.21 L

MAX ADD WAT = 177.91L (47GAL)
TEMPER WATER = .00L
WAT/CEM RATIO = 0.44

I HEREBY CERTIFY THAT THE AGGREGATES USED IN THIS CONCRETE ARE REPRESENTED BY SAMPLES TESTED AND APPROVED FOR THE OREGON DEPARTMENT OF TRANSPORTATION. OUR CEMENT SUPPLIER HAS CERTIFIED THAT THE CEMENT COMPLIES WITH A.S.T.M. SPECIFICATIONS OF THE OREGON DEPARTMENT OF TRANSPORTATION. THE PROPORTION OF ALL MATERIALS ARE IN ACCORDANCE WITH THE MIX DESIGNS FOR THE PROJECT.

ROSS ISLAND SAND & GRAVEL

BY ______________________

PREMIX DURABLE WORKABLE
ROSS ISLAND CONCRETE

4315 S.E. McLOUGHLIN BLVD.
PORTLAND, OREGON 97202
OFFICE 239-5504

PORTLAND 239-5500
VANCOUVER 694-1534

PROJECT ID [illegible] CUSTOMER NO. [illegible] JOB NO. [illegible] DATE 05-06-2005

12:56PM

SOLD TO BEDFORD CONSTRUCTION
5820 NE PORTLAND HWY
PORTLAND, OREGON
OR 97206

LOCATION/DIRECTION 4500 N EDGEWATER ST
(U356700)

ZONE Pg. 565 A J-4 1

ENVIRONMENTAL FEE ☐

TICKET NO. V - 344176
TIME WANTED 01:00PM
TRUCK NO. 80
DRIVER ANDREW BRININSTO
USE SLAB
TERMS 2%/10TH /NET1ST

LOAD QTY	TOTAL QTY	DESCRIPTION	PRICE	AMOUNT
6.88M3	13.76M3	MBVR3010 30MPA 3/4" MIX W/AIR		
9.00CY	18.00CY	MBVR3010 30MPA 3/4" MIX W/AIR 1		
1.00FEE		FUEL SURCHARGE - THIS DELIVERY		

SLUMP	LOAD NO.	QTY. ORDERED	NOTES:	
4.01 84.03	2	27.52	SSDW	SUB TOTAL SALES TAX TOTAL

LEFT PLANT 12:45 START UNLOAD 13:25 TIME ON JOB ______ EXCESS UNLOADING WATER ADDED BY CUSTOMER .0

ARRIVED JOB 13:20 FINISH UNLOAD 13:20 TIME ALLOWANCE ______ TIME ______ WASHINGTON MILES ______

*** CAUTION**
MAY CAUSE EYE OR SKIN INJURY
CONTAINS PORTLAND CEMENT
If any mixture gets into the eye, flush immediately and see a doctor. If any mixture gets onto the skin, wash promptly with water.
KEEP OUT OF REACH OF CHILDREN

BY SIGNING BELOW, YOU ACKNOWLEDGE RECEIPT OF THE PRODUCTS IDENTIFIED ABOVE. AND AGREE TO THE SALE TERMS ON THE REVERSE SIDE.

NOT RESPONSIBLE FOR DAMAGES ON DELIVERY INSIDE CURB LINE

RECEIVED BY ______________________ SIGN HERE

DELIVERY TICKET / CUSTOMER

Mat.	Moist	Actual
3/4	0.5%	7375.37 KG
SSD	5.0%	5252.07 KG
CMT	0.0%	2775.97 KG
VR	0.0%	2070.03 ML
20N	0.0%	7097.25 ML
C/W	0.0%	.00 L
R/W	0.0%	704.07 L

MAX ADD WAT = 234.69L (62GAL)
TEMPER WATER = .00L
WAT/CEM RATIO = 0.44

I HEREBY CERTIFY THAT THE AGGREGATES USED IN THIS CONCRETE ARE REPRESENTED BY SAMPLES TESTED AND APPROVED FOR THE OREGON DEPARTMENT OF TRANSPORTATION. OUR CEMENT SUPPLIER HAS CERTIFIED THAT THE CEMENT COMPLIES WITH A.S.T.M. SPECIFICATIONS OF THE OREGON DEPARTMENT OF TRANSPORTATION. THE PROPORTION OF ALL MATERIALS ARE IN ACCORDANCE WITH THE MIX DESIGNS FOR THE PROJECT.

ROSS ISLAND SAND & GRAVEL

BY ______________________

NO. 627

PREMIX ISLAND CONCRETE

PORTLAND, OREGON 97202
OFFICE 239-5504

VANCOUVER 694-1534

PROJECT ID 8960029 CUSTOMER NO. 03202 JOB NO. 12371 DATE 05-12-2005

SOLD TO BEDFORD CONSTRUCTION
5820 NE PORTLAND HWY
PORTLAND, OREGON
OR 97206

LOCATION/DIRECTION 6900 N EDGEWATER ST
(135850)

ZONE Pg. 565 J-H

ENVIRONMENTAL FEE ☐

09:29AM
TICKET NO. V - 344541
TIME WANTED ASAP
TRUCK NO. 80
DRIVER ANDREW BRININSTO
USE SLAB
TERMS 2%/10TH /NET1ST

LOAD QTY	TOTAL QTY	DESCRIPTION	PRICE	AMOUNT
3.82M3	3.82M3	MBVR3010 30MPA 3/4" MIX W/AIR		
5.00CY	5.00CY	MBVR3010 30MPA 3/4" MIX W/AIR		
1.00FEE		FUEL SURCHARGE - THIS DELIVERY		

SLUMP	LOAD NO.	QTY. ORDERED	NOTES:	SUB TOTAL / SALES TAX / TOTAL
101. 14-03	1	3.82	520W	

LEFT PLANT 0935 START UNLOAD 1005 TIME ON JOB ____ EXCESS UNLOADING ____ WATER ADDED BY CUSTOMER 10

ARRIVED JOB 1000 FINISH UNLOAD 1100 TIME ALLOWANCE ____ TIME ____ WASHINGTON MILES .0

BY SIGNING BELOW, YOU ACKNOWLEDGE RECEIPT OF THE PRODUCTS IDENTIFIED ABOVE, AND AGREE TO THE SALE TERMS ON THE REVERSE SIDE.

NOT RESPONSIBLE FOR DAMAGES ON DELIVERY INSIDE CURB LINE

RECEIVED BY ____________________ SIGN HERE

DELIVERY TICKET / CUSTOMER

*** CAUTION**
MAY CAUSE EYE OR SKIN INJURY
CONTAINS PORTLAND CEMENT
If any mixture gets into the eye, flush immediately and see a doctor. If any mixture gets onto the skin, wash promptly with water.
KEEP OUT OF REACH OF CHILDREN

Mat	Moist	Actual
3/4	0.5%	4082.31 KG
SSD	6.5%	3975.55 KG
CMT	0.0%	1485.51 KG
VR	0.0%	1301.16 ML
80N	0.0%	3903.49 ML
C/W	0.0%	.00 L
R/W	0.0%	344.46 L

MAX ADD WAT = 109.72L (29GAL)
TEMPER WATER = .00L
WAT/CEM RATIO = 0.44

I HEREBY CERTIFY THAT THE AGGREGATES USED IN THIS CONCRETE ARE REPRESENTED BY SAMPLES TESTED AND APPROVED FOR THE OREGON DEPARTMENT OF TRANSPORTATION. OUR CEMENT SUPPLIER HAS CERTIFIED THAT THE CEMENT COMPLIES WITH A.S.T.M. SPECIFICATIONS OF THE OREGON DEPARTMENT OF TRANSPORTATION. THE PROPORTION OF ALL MATERIALS ARE IN ACCORDANCE WITH THE MIX DESIGNS FOR THE PROJECT.

ROSS ISLAND SAND & GRAVEL

BY ____________________

NO. 627

ROSS PREMIX ISLAND CONCRETE

ROSS ISLAND SAND AND GRAVEL CO.

4315 S.E. McLOUGHLIN BLVD.
PORTLAND, OREGON 97202
OFFICE 239-5504

DISPATCH OFFICE
PORTLAND 239-5500
VANCOUVER 694-153

OJECT ID. [illegible] CUSTOMER NO. [illegible] JOB NO. [illegible] DATE [illegible]

LD TO BEDFORD CONSTRUCTION
5820 NE PORTLAND HWY
PORTLAND, OREGON
OR 97205

CATION/DIRECTION 6900 N EDGEWATER ST
(135530)

TICKET NO. 08:44AM
TIME WANTED A - 343742
TRUCK NO. 09:30AM
DRIVER 69
USE GARY WILSON
TERMS FOOTINGS
2%/10TH /NET 1ST

NE [illegible] ENVIRONMENTAL FEE ☐

LOAD QTY	TOTAL QTY	DESCRIPTION	PRICE	AMOUNT
6.88M3	6.88M3	MBVR3010 30MPA 3/4" MIX W/AIR		
9.00CY	9.00CY	MBVR3010 30MPA 3/4" MIX W/AIR		
1.00FEE		FUEL SURCHARGE - THIS DELIVERY		

JMP	LOAD NO.	QTY. ORDERED	NOTES: 859W	SUB TOTAL
	1	20.54		SALES TAX
				TOTAL

NT [illegible] START UNLOAD [illegible] TIME ON JOB [illegible] EXCESS UNLOADING [illegible] WATER ADDED BY CUSTOMER [illegible]

IVED [illegible] FINISH UNLOAD [illegible] TIME ALLOWANCE [illegible] TIME [illegible] WASHINGTON MILES [illegible]

SIGNING BELOW, YOU ACKNOWLEDGE RECEIPT OF THE PRODUCTS IDENTIFIED OVE. AND AGREE TO THE SALE TERMS ON THE REVERSE SIDE.

NOT RESPONSIBLE FOR DAMAGES ON DELIVERY INSIDE CURB LINE

CEIVED BY [illegible] SIGN HERE [illegible] DELIVERY TICKET / CUSTOMER

*** CAUTION**

MAY CAUSE EYE OR SKIN INJURY
CONTAINS PORTLAND CEMENT

If any mixture gets into the eye, flush immediately and see a doctor. If any mixture gets onto the skin, wash promptly with water.

KEEP OUT OF REACH OF CHILDREN

Mat.	Moist	Actual
3/4	1.0%	730E.00 KG
SSD	4.5%	5100.00 KG
C/W	0.0%	.00 KG
R/W	0.0%	737.54 KG
CNT	0.0%	2668.57 KG
WR	0.0%	1774.31 ML
20N	0.0%	7097.25 ML

MAX ADD WAT = 132.49L (35GAL)
TEMPER WATER = .00L
WAT/CEM RATIO = 0.44

I HEREBY CERTIFY THAT THE AGGREGATES USED IN THIS CONCRETE ARE REPRESENTED BY SAMPLES TESTED AND APPROVED FOR THE OREGON DEPARTMENT OF TRANSPORTATION. OUR CEMENT SUPPLIER HAS CERTIFIED THAT THE CEMENT COMPLIES WITH A.S.T.M. SPECIFICATIONS OF THE OREGON DEPARTMENT OF TRANSPORTATION. THE PROPORTION OF ALL MATERIALS ARE IN ACCORDANCE WITH THE MIX DESIGNS FOR THE PROJECT.

ROSS ISLAND SAND & GRAVEL.

BY _____

ROSS PREMIX ISLAND CONCRETE

ROSS ISLAND SAND AND GRAVEL CO.

4315 S.E. McLOUGHLIN BLVD.
PORTLAND, OREGON 97202
OFFICE 239-5504

PORTLAND 239-5500
VANCOUVER 694-1534

OJECT ID. | CUSTOMER NO. | JOB NO. | DATE

LD TO
BEDFORD CONSTRUCTION
3820 NE PORTLAND HWY
PORTLAND, OREGON
OR 97206

CATION/DIRECTION 6300 N EDGEWATER ST
(135330)

TICKET NO. A - 343749
TIME WANTED 10:30AM
TRUCK NO. 98
DRIVER RALPH BURNS
USE FOOTINGS
TERMS 2%/10TH /NET/1ST

INE ENVIRONMENTAL FEE ☐

LOAD QTY	TOTAL QTY	DESCRIPTION	PRICE	AMOUNT
6.00M3	20.04	4BUR3010 3000 3/4" MIX W/AIR		
9.00CY	27.0	4BUR3010 30MPA 3/4" MIX W/AIR		
1.00FES		FUEL SURCHARGE - THIS DELIVERY		

.UMP	LOAD NO.	QTY. ORDER
4.0		20.

TES: SSBW

SUB TOTAL
SALES TAX
TOTAL

START UNLOAD
FINISH UNLOAD

TIME ON JOB | EXCESS UNLOADING | WATER ADDED BY CUSTOMER
TIME ALLOWANCE | TIME | WASHINGTON MILES 0

/ SIGNING BELOV , YOU ACKNOWLE
BOVE, AND AGRE TO THE SALE TE
EIPT OF THE PRODUCTS IDENTIFIED
THE REVERSE SIDE.

NOT RESPONSIBLE FOR DAMAGES ON DELIVERY INSIDE CURB LINE

ECEIVED BY _____ SIGN

DELIVERY TICKET / CUSTOMER

*** CAUTION**

MAY CAUSE EYE OR SKIN INJUR
CONTAINS PORTLAND CEMENT

If any mixture gets into the eye, flush immediately and see a doctor.
If any mixture gets into the skin, wash promptly with water.

KEEP OUT OF REACH OF CHILDRE

Mat.	Batched	Actual
3/4	1.0%	7393.58 KG
SSD	5.5%	5343.29 KG
C/W	0.0%	.00 KG
R/W	0.0%	698.16 KG
CMT	0.0	6673.91 KG
VA	0.0%	1774.31 ML
SUN	0.0	7097.25 ML

MAX ADD WAT = 24.91L (33PAL)
TEMPER WATER = .00L
MAT/CEM RATIO = 0.44

I HEREBY CERTIFY THAT THE AGGREGATE USED IN THIS CONCRETE ARE REPRESENTED B SAMPLES TESTED AND APPROVED FOR TH OREGON DEPARTMENT OF TRANSPORTATIO OUR CEMENT SUPPLIER HAS CERTIFIED THA THE CEMENT COMPLIES WITH A.S.T.M. SPECIF CATIONS OF THE OREGON DEPARTMENT C TRANSPORTATION. THE PROPORTION OF AI MATERIALS ARE IN ACCORDANCE WITH THE M DESIGNS FOR THE PROJECT.

ROSS ISLAND SAND & GRAVEL

BY _____

ROSS ISLAND SAND AND GRAVEL CO.
4315 S.E. McLOUGHLIN BLVD.
PORTLAND, OREGON 97202
OFFICE 239-5504

DISPATCH OFFICE
PORTLAND 239-5500
VANCOUVER 694-1534

OJECT ID. CUSTOMER NO. JOB NO. DATE

LD TO BEDFORD CONSTRUCTION
5880 NE PORTLAND HWY
PORTLAND, OREGON
OR 97206

09:20AM
TICKET NO. A - 343744
TIME WANTED 10:00AM
TRUCK NO. 90
DRIVER DARYL BENFIT
USE FOOTINGS
TERMS 2%/10TH /NET15T

CATION/DIRECTION 6900 N EDGEWATER ST
(135530)

NE

ENVIRONMENTAL FEE

LOAD QTY	TOTAL QTY	DESCRIPTION	PRICE	AMOUNT
6.88M3	13.76M3	MBVR3010 30MPA 3/4" MIX W/AIR		
9.00CY	18.00CY	MBVR3010 30MPA 3/4" MIX W/AIR		
1.00FEE		FUEL SURCHARGE - THIS DELIVERY		

UMP	LOAD NO.	QTY. ORDERED	NOTES:	SUB TOTAL / SALES TAX
1.0	2	20.64	828W	TOTAL

NT 930 START UNLOAD 10:30 TIME ON JOB EXCESS UNLOADING WATER ADDED BY CUSTOMER 20

RIVED 9:00 FINISH UNLOAD TIME ALLOWANCE TIME WASHINGTON MILES

SIGNING BELOW, YOU ACKNOWLEDGE RECEIPT OF THE PRODUCTS IDENTIFIED OVE, AND AGREE TO THE SALE TERMS ON THE REVERSE SIDE.

NOT RESPONSIBLE FOR DAMAGES ON DELIVERY INSIDE CURB LINE

* CAUTION
MAY CAUSE EYE OR SKIN INJURY
CONTAINS PORTLAND CEMENT
If any mixture gets into the eye, flush immediately and see a doctor.
If any mixture gets onto the skin, wash promptly with water.
KEEP OUT OF REACH OF CHILDREN

CEIVED BY ______ SIGN HERE

DELIVERY TICKET / CUSTOMER

Mat.	Moist	Actual
3/4	1.0%	7438.88 KG
SND	4.0%	5252.57 KG
C/W	0.0%	.00 KG
R/W	0.0%	760.22 KG
CMT	0.0%	2676.18 KG
VR	0.0%	1774.31 ML
80N	0.0%	7097.25 ML

MAX ADD WAT = 132.49L (35GAL)
TEMPER WATER = .00L
WAT/CEM RATIO = 0.44

I HEREBY CERTIFY THAT THE AGGREGATES USED IN THIS CONCRETE ARE REPRESENTED BY SAMPLES TESTED AND APPROVED FOR THE OREGON DEPARTMENT OF TRANSPORTATION. OUR CEMENT SUPPLIER HAS CERTIFIED THAT THE CEMENT COMPLIES WITH A.S.T.M. SPECIFICATIONS OF THE OREGON DEPARTMENT OF TRANSPORTATION. THE PROPORTION OF ALL MATERIALS ARE IN ACCORDANCE WITH THE MIX DESIGNS FOR THE PROJECT.

ROSS ISLAND SAND & GRAVEL.

BY ______

ROSS ISLAND SAND AND GRAVEL CO.
4315 S.E. McLOUGHLIN BLVD.
PORTLAND, OREGON 97202
OFFICE 239-5504

DISPATCH OFFICE
PORTLAND 239-5500
VANCOUVER 694-153

ROSS ISLAND PREMIX CONCRETE — DURABLE — WORKABLE

OJECT ID. [illegible] CUSTOMER NO. [illegible] JOB NO. [illegible] DATE [illegible]

)LD TO BEDFORD CONSTRUCTION
5820 NE PORTLAND HWY
PORTLAND, OREGON
OR 97206

)CATION/DIRECTION 5900 N EDGEWATER ST
(135530)

)NE [illegible]

ENVIRONMENTAL FEE ☐

	08:44AM
TICKET NO.	A - 343742
TIME WANTED	09:30AM
TRUCK NO.	88
DRIVER	GARY WILSON
USE	FOOTINGS
TERMS	2%/10TH /NET 15T

LOAD QTY	TOTAL QTY	DESCRIPTION	PRICE	AMOUNT
6.88M3	6.88M3	MBVR3010 30MPA 3/4" MIX W/AIR		
9.00CY	9.00CY	MBVR3017 30MPA 3/4" MIX W/AIR		
1.00FEE		FUEL [illegible]RCHARGE - THIS DELIVERY		

.UMP	LOAD NO.	QTY. ORDERED	NOTES:
4.00	1	20.64	8:00

SUB TOTAL
SALES TAX
TOTAL

ANT ____ START UNLOAD ____ TIME ON JOB ____ EXCESS UNLOADING ____ WATER ADDED BY CUSTOMER ____
RIVED ____ FINISH UNLOAD ____ TIME ALLOWANCE ____ TIME ____ WASHINGTON MILES ____

' SIGNING BELOW, YOU ACKNOWLEDGE RECEIPT OF THE PRODUCTS IDENTIFIED
3OVE, AND AGREE TO THE SALE TERMS ON THE REVERSE SIDE.

NOT RESPONSIBLE FOR DAMAGES ON DELIVERY INSIDE CURB LINE

*CAUTION
MAY CAUSE EYE OR SKIN INJUR
CONTAINS PORTLAND CEMENT
If any mixture gets into the eye, flush immediately and see a doctor. If any mixture gets onto the skin, wash promptly with water.
KEEP OUT OF REACH OF CHILDR

:CEIVED BY ____ SIGN HERE

DELIVERY TICKET / CUSTOMER

Mat.	Mo[illegible]	Actual
3/4	[illegible].9%	72[illegible]2.00 KG
SSD	[illegible].0%	5150.[illegible] KG
C/W	0.2%	.00 KG
R/W	0.0%	727.04 KG
CMT	0.0%	2662.[illegible] KG
VR	0.0%	[illegible]77[illegible].31 ML
30N	0.0%	7007.[illegible]5 ML

MAX ADD WAT = 1[illegible]2.45L (30GAL)
TEMPER WATER = .00L
WAT/CEM RATIO = 0.[illegible]

I HEREBY CERTIFY THAT THE AGGREGATE USED IN THIS CONCRETE ARE REPRESENTED B SAMPLES TESTED AND APPROVED FOR TH OREGON DEPARTMENT OF TRANSPORTATIO OUR CEMENT SUPPLIER HAS CERTIFIED THA THE CEMENT COMPLIES WITH A.S.T.M. SPECI CATIONS OF THE OREGON DEPARTMENT O TRANSPORTATION. THE [illegible]ORTION OF A MATERIALS ARE IN ACCORDANCE WITH THE M DESIGNS FOR THE PROJECT.

ROSS ISLAND SAND & GRAVEL

BY ____

ROSS ISLAND SAND AND GRAVEL CO.
4315 S.E. McLOUGHLIN BLVD.
PORTLAND, OREGON 97202
OFFICE 239-5504

PORTLAND 239-5500
VANCOUVER 694-1534

ROSS PREMIX ISLAND CONCRETE

OJECT ID. | CUSTOMER NO. | JOB NO. | DATE

LD TO BEDFORD CONSTRUCTION
5820 NE PORTLAND HWY
PORTLAND, OREGON
OR 97206

CATION/DIRECTION 6900 N EDGEWATER ST
(135530)

TICKET NO. A - 343749
TIME WANTED 10:30AM
TRUCK NO. 62
DRIVER RALPH BURNS
USE FOOTINGS
TERMS 2%/10TH /NET 1ST

ONE | ENVIRONMENTAL FEE ☐

LOAD QTY	TOTAL QTY	DESCRIPTION	PRICE	AMOUNT
6.88M3	20.64M3			
9.00CY	27.00CY			
1.00FEE				

JUMP	LOAD NO.	QTY. ORDERED
4.0	3	20.64

SUB TOTAL
SALES TAX
TOTAL

ANT 12:25 START UNLOAD 12:25
RRIVED 12:21 FINISH UNLOAD 12:50

*** CAUTION**
MAY CAUSE EYE OR SKIN INJUR
CONTAINS PORTLAND CEMENT
If any mixture gets into the eye, flush immediately and see a doctor. If any mixture gets onto the skin, wash promptly with water.
KEEP OUT OF REACH OF CHILDRI

Y SIGNING BELOW, YOU ACKNOWLEDGE RECEIPT OF THE PRODUCTS IDENTIFIED BOVE. AND AGREE TO THE SALE TERMS ON THE REVERSE SIDE.

NOT RESPONSIBLE FOR DAMAGES ON DELIVERY INSIDE

ECEIVED BY _____ SIGN HERE _____ DELIVERY TICKET / CUSTOMER

Mat.	Moist	Actual
3/4	1.0%	7393.52 KG
SSD	5.5%	5343.29 KG
C/W	0.0%	.00 KG
R/W	0.0%	692.10 KG
CMT	0.0%	2673.91 KG
VR	0.0%	1774.31 ML
20N	0.0%	7097.25 ML

I H I CERTIFY THAT THE AGGREGATE
USE S CONCRETE ARE REPRESENTED
SAM ESTED AND APPROVED FOR TH
ORI EPARTMENT OF TRANSPORTATIO
OUR IT SUPPLIER HAS CERTIFIED TH
THE T COMPLIES WITH A.S.T.M. SPECI
CA THE OREGON DEPARTMENT
TRA ATION. THE PROPORTION OF A
MA ARE IN ACCORDANCE WITH THE M
DES R THE PROJECT.

RO D SAND & GRAVEL

BY _____

MAX ADD WAT = 124.91L. (33GAL)
TEMPER WATER = .00L
WAT/CEM RATIO = 0.44

ROSS PREMIX ISLAND CONCRETE

ROSS ISLAND SAND AND GRAVEL CO.

4315 S.E. McLOUGHLIN BLVD.
PORTLAND, OREGON 97202
OFFICE 239-5504

PORTLAND 239-5500
VANCOUVER 694-1534

OJECT ID.	CUSTOMER NO.	JOB NO.	DATE
[illegible]	[illegible]	[illegible]	[illegible] 09:20AM

ILD TO: BEDFORD CONSTRUCTION
5820 NE PORTLAND HWY
PORTLAND, OREGON
OR 97206

ICATION/DIRECTION: 6900 N EDGEWATER ST
(135530)

ONE: Pg 565 , I-4

ENVIRONMENTAL FEE ☐

TICKET NO.	A - 343744
TIME WANTED	10:00AM
TRUCK NO.	90
DRIVER	DARYL BENFIT
USE	FOOTINGS
TERMS	2%/10TH /NET15T

LOAD QTY	TOTAL QTY	DESCRIPTION	PRICE	AMOUNT
6.88M3	13.76M3	[illegible]		
9.00CY	18.00CY	[illegible]		
1.00FEE		[illegible]		

LUMP	LOAD NO.	QTY. ORDERED		
4.0	2	20.64		SUB TOTAL
				SALES TAX
				TOTAL

LEFT PLANT 9:30 START UNLOAD 10:30
ARRIVED JOB 9:45 FINISH UNLOAD 11:05

BY SIGNING BELOW, YOU ACKNOWLEDGE RECEIPT OF THE PRODUCTS IDENTIFIED ABOVE, AND AGREE TO THE SALE TERMS ON THE REVERSE SIDE.

NOT RESPONSIBLE FOR DAMAGES ON DELIVERY INSIDE [illegible]

RECEIVED BY ____________ SIGN HERE

DELIVERY TICKET / CUSTOMER

*** CAUTION**
MAY CAUSE EYE OR SKIN INJURY
CONTAINS PORTLAND CEMENT
If any mixture gets into the eye, flush immediately and see a doctor. If any mixture gets onto the skin, wash promptly with water.
KEEP OUT OF REACH OF CHILDREN

Mat.	Moist	Actual
3/4	1.0%	7430.88 KG
SSD	4.0%	5252.57 KG
C/W	0.0%	.00 KG
R/W	0.0%	760.22 KG
CMT	0.0%	2676.18 KG
VR	0.0%	1774.31 ML
20N	0.0%	7097.25 ML

MAX ADD WAT = 132.49L (35GAL)
TEMPER WATER = .00L
WAT/CEM RATIO = 0.44

I [illegible] CERTIFY THAT THE AGGREGATE US[illegible]S CONCRETE ARE REPRESENTED [illegible] SA[illegible] TESTED AND APPROVED FOR TH[illegible] OR[illegible] DEPARTMENT OF TRANSPORTATION OU[illegible]NT SUPPLIER HAS CERTIFIED TH[illegible] TH[illegible]T COMPLIES WITH A.S.T.M. SPEC[illegible] CA[illegible]F THE OREGON DEPARTMENT [illegible] TR[illegible]ATION THE PROPORTION OF [illegible] MA[illegible] ARE IN ACCORDANCE WITH THE [illegible] DE[illegible] FOR THE PROJECT.

RO[illegible]D SAND & GRAVEL

BY ____________

ROSS ISLAND SAND & GRAVEL CO.

ROSS ISLAND MIX NUMBER
MSVR3010
Strength Compressive: 30.000 Mpa
4/12/2005

Contractor :	WILDER CONSTRUCTION
Project :	McCORMACK BAXTER
Construction Type :	GENERAL - FOOTINGS - SLAB ON GRADE
Placement :	CHUTE OR PUMP

Weights per Cubic Meter (Saturated, Surface-Dry)

	Quantity	Density	Yield, m³
Type I/II Cement, kg	390.0	3.150	0.124
Water, liter	173.24	1.000	0.173
ASTM #67 ROSS ISLAND 3/4", kg	1,065.1	2.780	0.383
ASTM C33 ROSS ISLAND SAND, kg	728.7	2.720	0.268
ASTM C-494 Type A Water Reducer, liter	1.017	1.100	0.001
ASTM C-260 Air Entraining Agent (DOSE VARIES+	0.254	1.200	0.000
Total Air, %	5.0 ± 1.5		0.050
		TOTAL	1.000

Water/Cement Ratio, kgs/kg	0.44
Slump, High, mm	127.0
Low, mm	76.2
Concrete Unit Weight, kg/m³	2,358.7
Yield, %	100.0

Exposure Condition : Moderate exposure

Prepared by :

ROSS ISALND TECHNICAL SERVICES

4315 South East McLoughlin Blvd. • P.O. Box 82249 • Portland, Oregon 97282-0249 • 239-5504

C Field Communications and Change Orders

ecology and environment, inc.
International Specialists in the Environment

333 Southwest Fifth Avenue, Suite 608
Portland, Oregon 97204
Tel: (503) 248-5600, Fax: (503) 248-5577

Support Facility Modifications
McCormick & Baxter Creosoting Co. Site

EE-WC-01

To: Pat Turina
Wilder Construction,

From: Andrew Murphy
Oversight Supervisor
Ecology and Environment, Inc.

Cc: Kevin Parrett, Project Manager, DEQ
Steve Campbell, Contract Manager, DEQ

Date: March 29, 2005

Re: Lay out of the column bases and details for the new shop foundation

There appears to be a problem with the column bases. Assuming the garage doors are 10' wide, two of the column bases overlap one another (A533 appears to overlap A394). This would be at the garage door end, right corner standing outside and looking at the garage doors. The Engineer noted that the garage door layout is not symmetrical about the centerline. Can you contact the manufacturer and resolve the issue?

Furthermore, Details A611 and A612 show the base plate at the front (not garage door) end extending 1/8" beyond the wall. Will you please confirm this?

Andrew Murphy

Date: 3/29/05

Received by:

Date: 3/29/05

ecology and environment, inc.
International Specialists in the Environment

333 Southwest Fifth Avenue, Suite 608
Portland, Oregon 97204
Tel: (503) 248-5600, Fax: (503) 248-5577

Support Facility Modifications
McCormick & Baxter Creosoting Co. Site

EE-WC-02

To: Pat Turina
Wilder Construction,

From: Andrew Murphy
Oversight Supervisor
Ecology and Environment, Inc.

Cc: Kevin Parrett, Project Manager, DEQ
Steve Campbell, Contract Manager, DEQ

Date: March 29, 2005

Re: Responses to Questions presented during first 10-minute meeting

A number of questions were asked during the first on-site 10-minute meeting on 3/28/05 by Wilder Construction's site superintendent Don Davis. In the future it would be in the best interest of the involved parties to convey questions of contract requirements and scope in writing. In an effort to minimize the possible impacts to the project E & E is documenting the questions herein. The following are E & E's interpretations of the questions posed and responses:

1. Where is the designated location for materials that are currently stockpiled on the asphalt?
   Stockpile the materials as close as possible to the Biobags and fencing already stockpiled to the west of the asphalt. Also stockpile the woody debris and removed vegetation to the northwest of the asphalt area as close as practical.

2. Which trees are to be removed?
   Remove the trees that would inhibit work progression or are within the new paved area. It appears as though most of the trees to the west of the asphalt will be in the way of construction and should be removed.

3. Who will be relocating the backflow control valves (check valves)?
   The specifications regarding relocation of the back-flow control valve are within Section 02520 subsection 3.3 page 02520-7 which states:
   A. *The Subcontractor shall perform the relocation of the existing back-flow control valve to a location indicated on the drawings.*

4. The bury depth for the waterline does not appear to be deep enough for code requirements. Is this correct?
The water line shall be installed as shown on the drawings. The pipe will have an additional two feet of material or more upon completion of the Upland Cap planned for construction later this year.

5. What is the compaction requirement for the Select Backfill?
The specifications regarding the Select Backfill are within Section 02200 1.5 Quality Assurance, C. Select Backfill:

    1. *Tests and analysis of fill materials will be performed in accordance with ANSI/ASTM D1577, ASTM D2922, and ASTM D2487.*

Refer to Section 02200 1.3 REFERENCES G., F., and E for referenced ASTMs. ASTM D1577 is the Moisture-Density Relations of Soils and Soil-Aggregate Mixture Using 10 pound Rammer and 18-inch Drop, which establishes the modified proctor for compaction density. According to Section 02200, subsection 3.4 COMPACTION:

D. Begin compaction of each layer immediately after the material is spread and continue until a density of not less than 95% of maximum dry density has been achieved...

Andrew Murphy

Date:
3/29/05

Received by:

Date: 3/29/05

ecology and environment, inc.
International Specialists in the Environment

333 Southwest Fifth Avenue, Suite 608
Portland, Oregon 97204
Tel: (503) 248-5600, Fax: (503) 248-5577

Support Facility Modifications
McCormick & Baxter Creosoting Co. Site

EE-WC-03

To: Pat Turina
Wilder Construction,

From: Andrew Murphy
Oversight Supervisor
Ecology and Environment, Inc.

Cc: Kevin Parrett, Project Manager, DEQ
Steve Campbell, Contract Manager, DEQ

Date: March 31, 2005

Re: Distribution of Foundation Footing Details

Please find attached to this field memo eight pages entitled Shop Building Foundations.

Andrew Murphy

Date: 3/31/05

Received by:

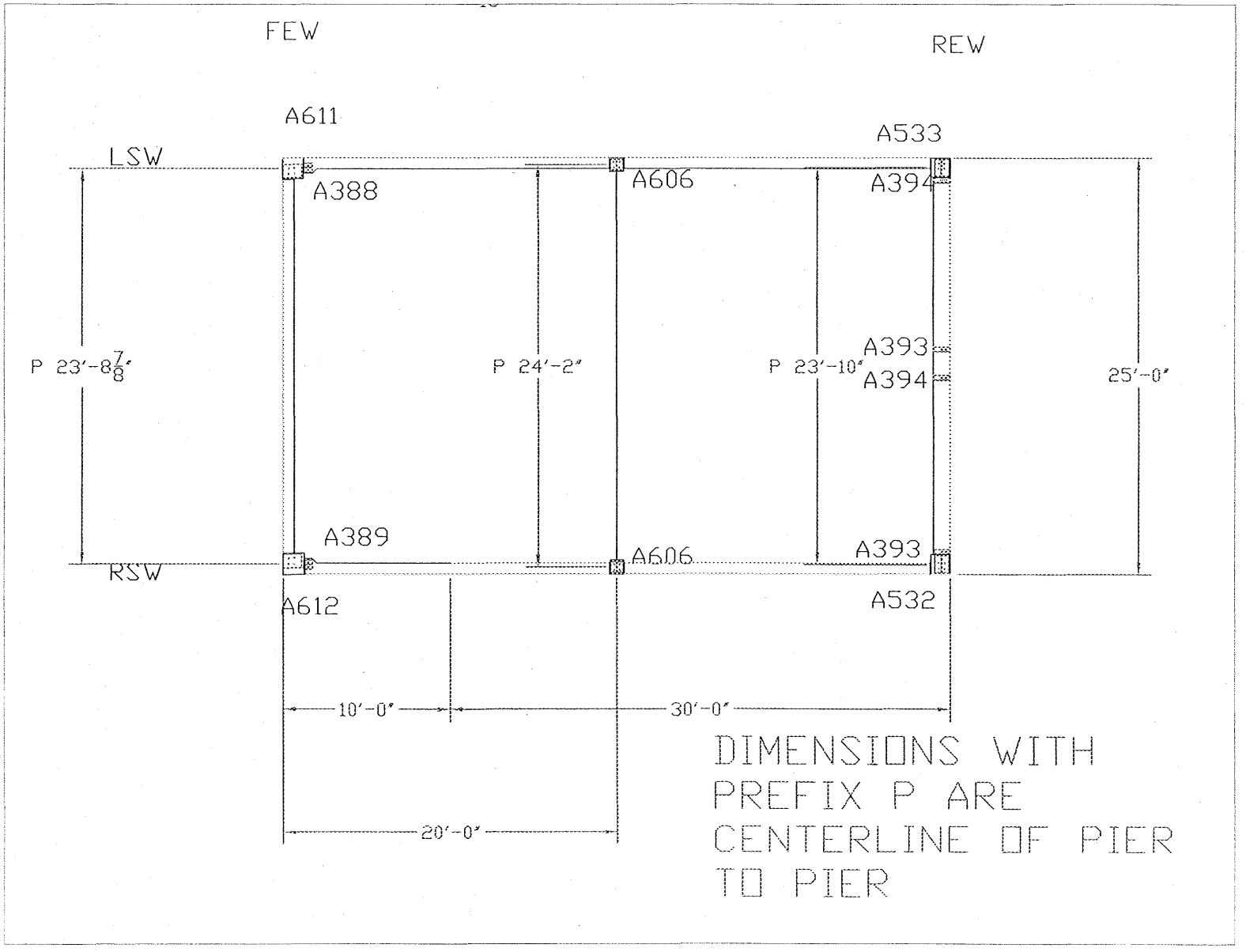
Date: 3/31/05

McCORMICK AND BAXTER
SUPPORT FACILITY MODIFICATIONS
SHOP BUILDING FOUNDATION

CONCRETE NOTES

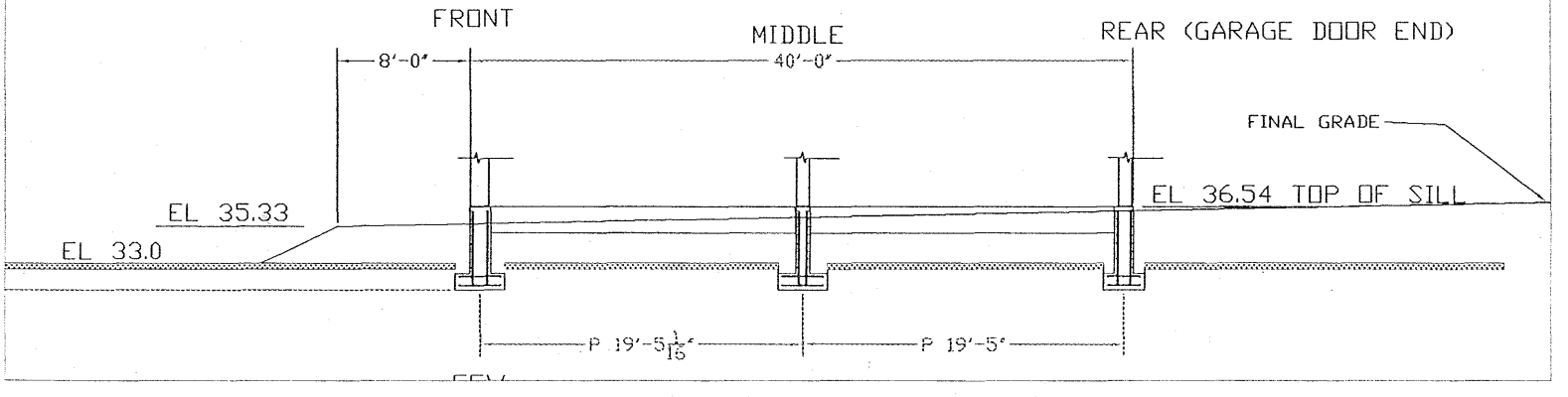
1. All steel reinforcement grade 60
2. Clearances:
   a. Concrete placed on soil: 3"
   b. Concrete with backfill: 1-1/2"
   c. Interior concrete: ¾"
   d. Stems of piers: 1-1/2"
3. Horizontal steel reinforcement in pier stems: #3 stirrups @ 6
4. All reinforcement #4 unless noted otherwise.
5. Chamfer ½" at exposed edges of piers.
6. Chamfer at other exposed edges ½" or 1-1/2" (At Subcontractor's option, but consistency is required).

LAYOUT MUST BE CHECKED AGAINST BUILDING MANUFACTURER COLUMN LAYOUTS.

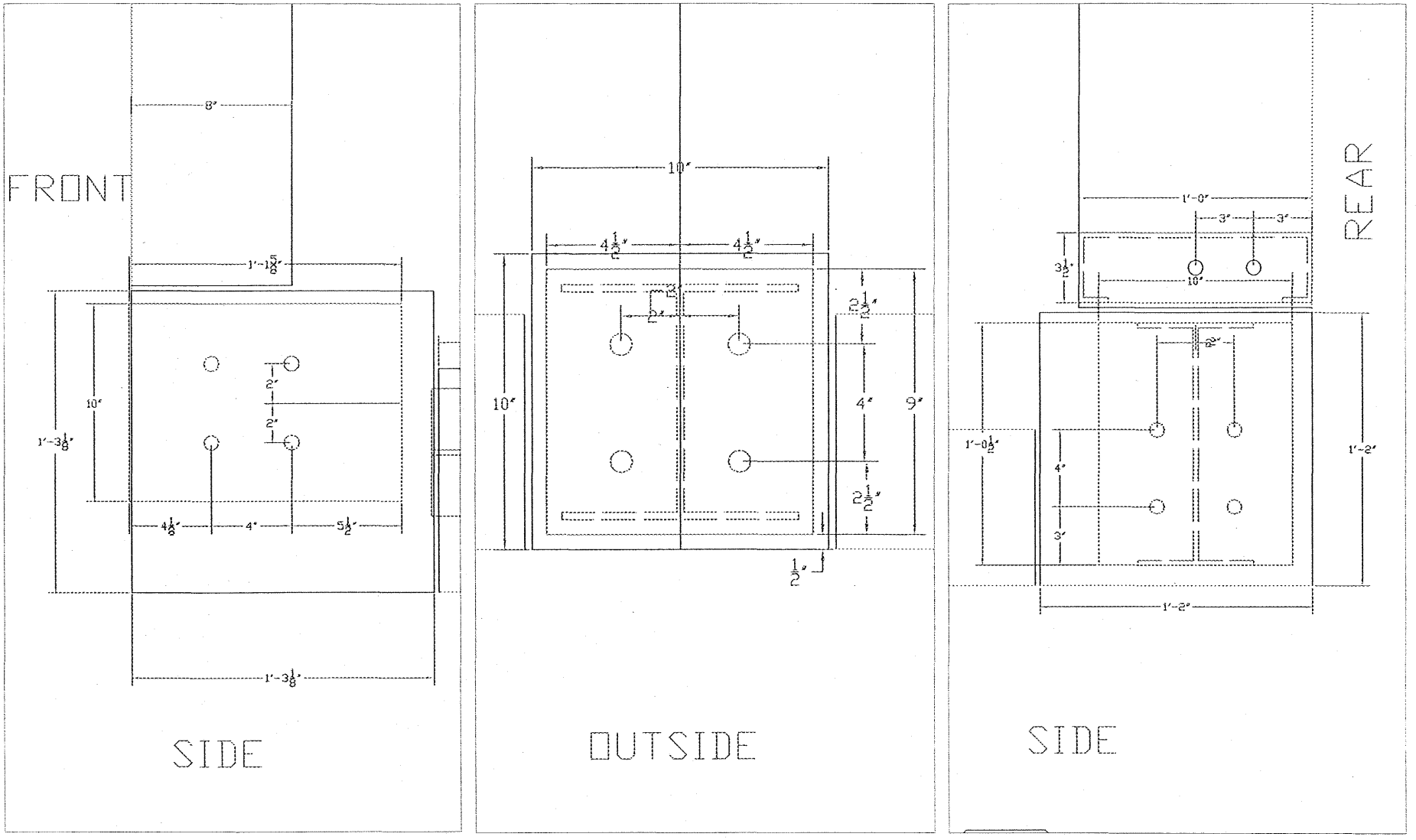

FEW
REW
A611
A533
LSW
A388
A606
A394
A393
A394
P 23'-8 7/8"
P 24'-2"
P 23'-10"
25'-0"
A389
A606
A393
RSW
A612
A532
10'-0"
30'-0"
20'-0"
DIMENSIONS WITH PREFIX P ARE CENTERLINE OF PIER TO PIER

PIER LAYOUT

DIMENSIONS WITH
PREFIX P ARE
CENTERLINE OF PIER
TO PIER

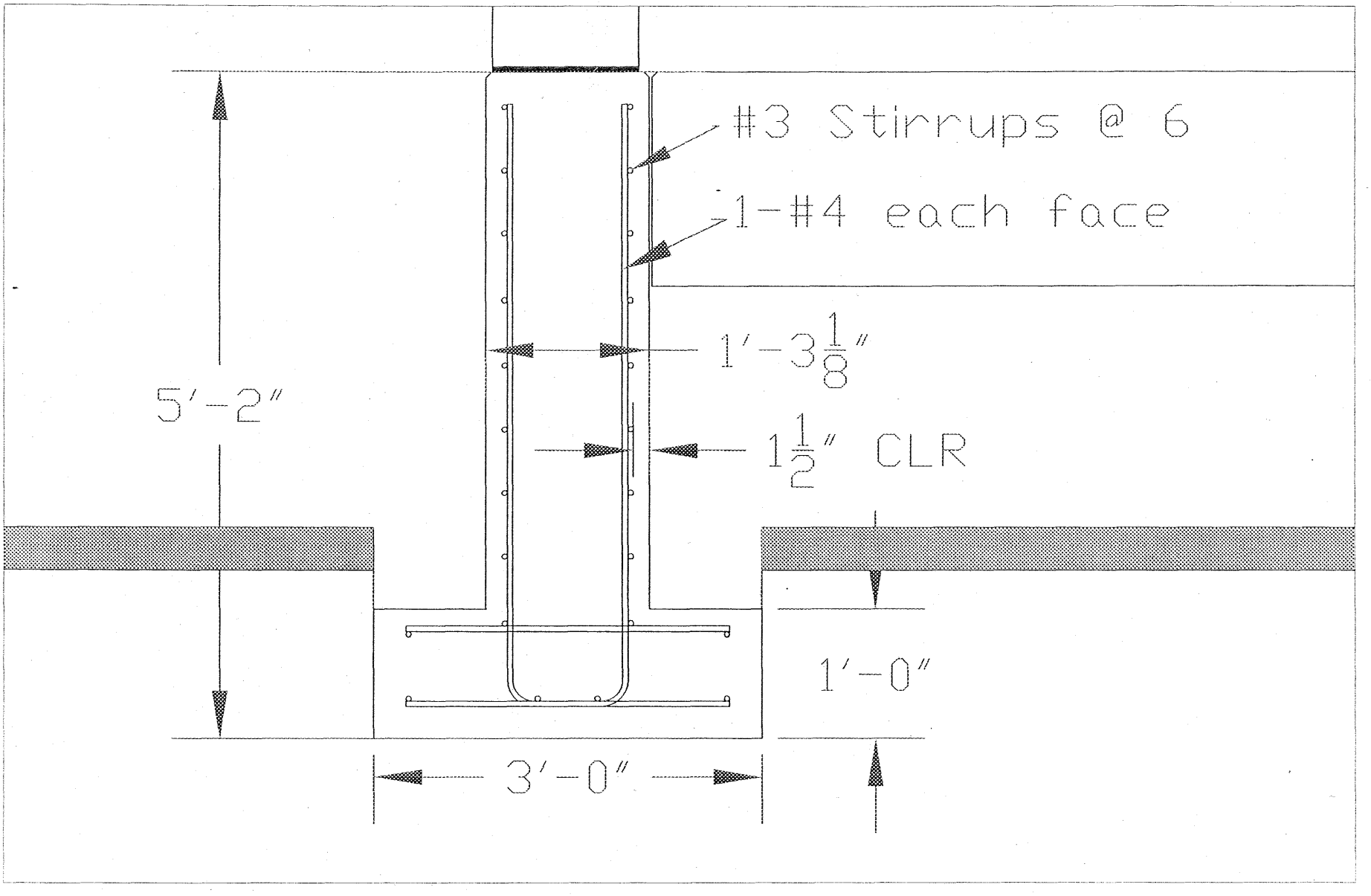


FOUNDATION PROFILE



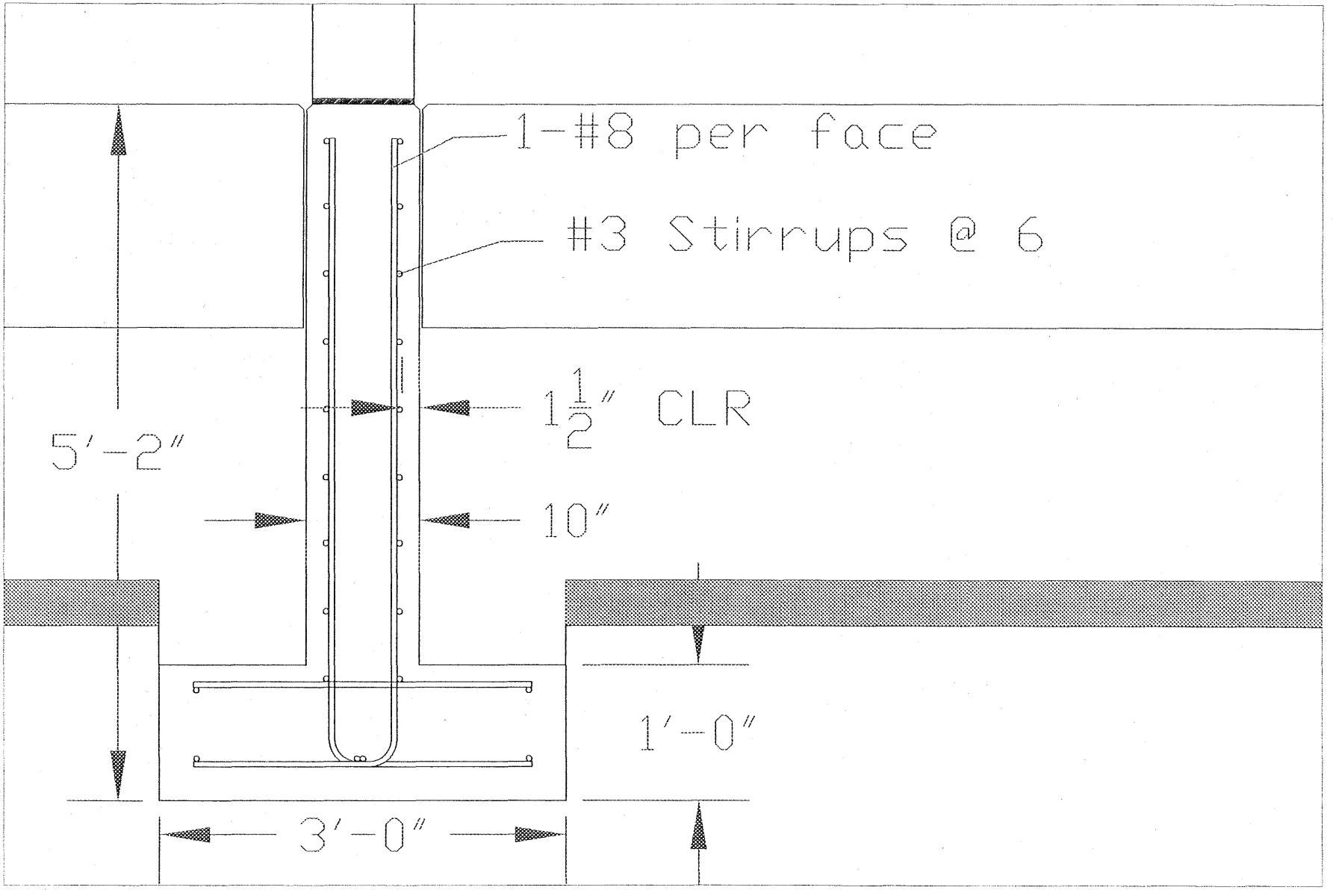
FRONT MIDDLE REAR

TOPS OF PIERS



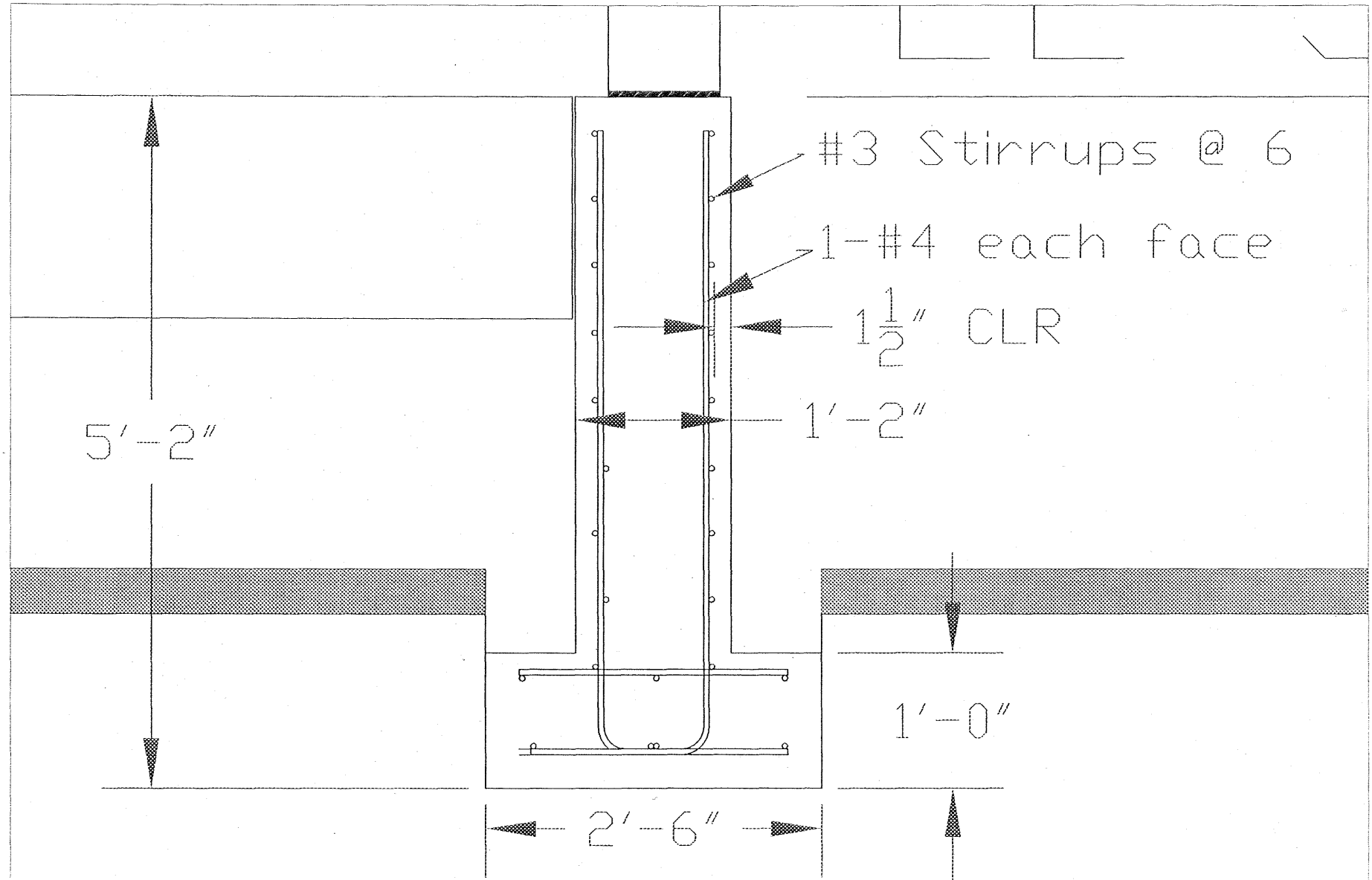
FRONT

PIER ELEVATIONS



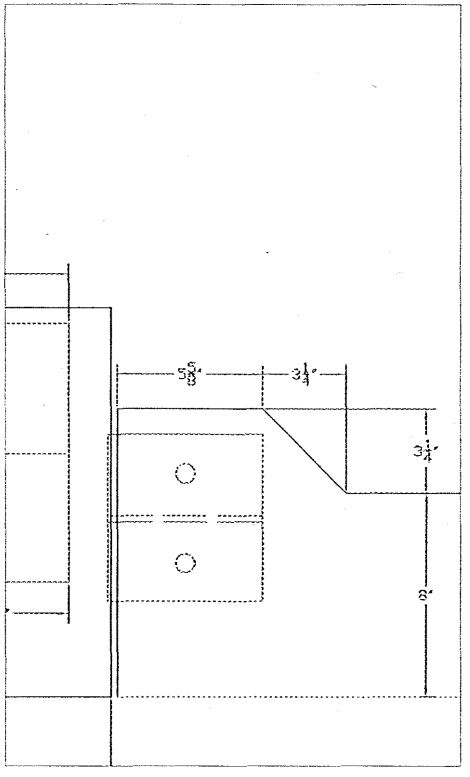
MIDDLE

PIER ELEVATIONS

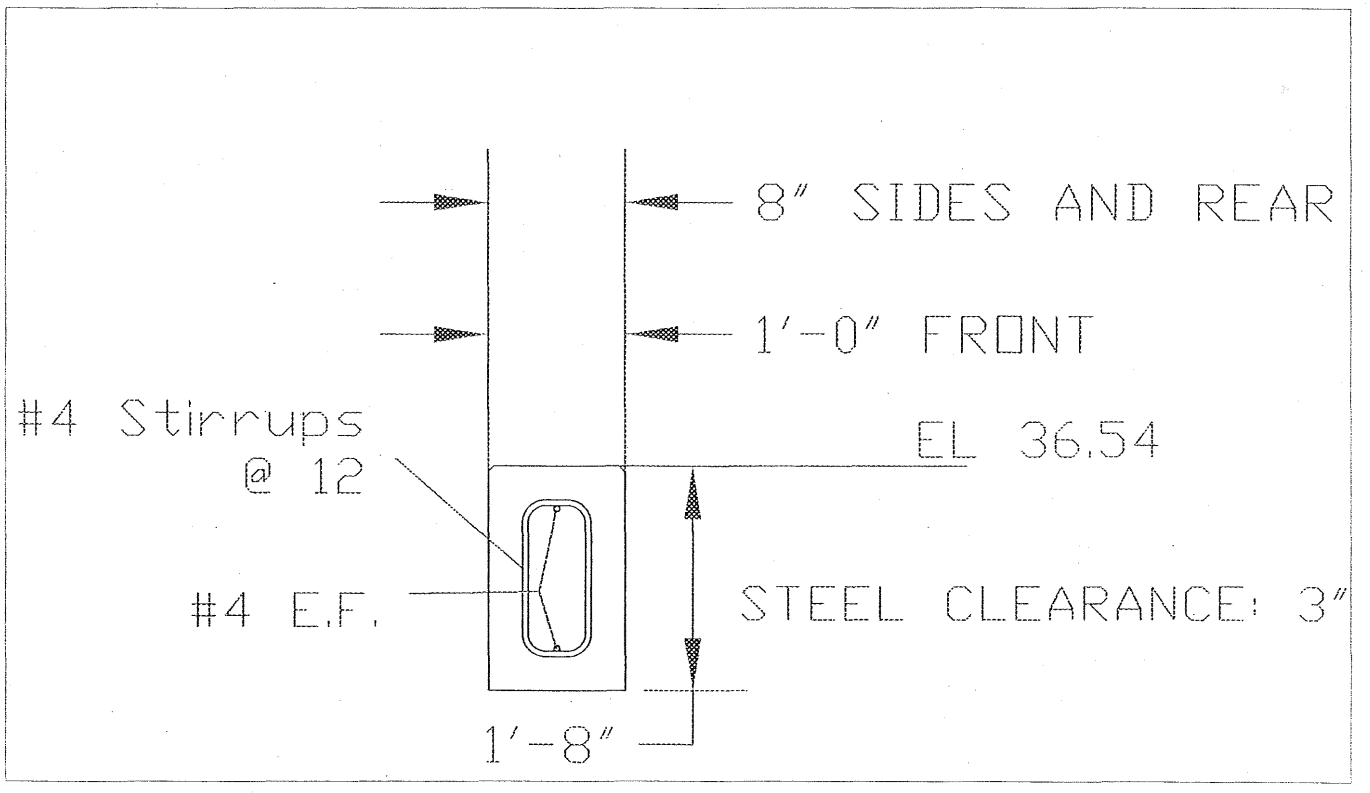


REAR

PIER ELEVATIONS



SIDE SILL
FRONT END
PLAN



SECTION

SILLS

ecology and environment, inc.
International Specialists in the Environment

333 Southwest Fifth Avenue, Suite 608
Portland, Oregon 97204
Tel: (503) 248-5600, Fax: (503) 248-5577

Support Facility Modifications
McCormick & Baxter Creosoting Co. Site

EE-WC-04

To: Pat Turina
Wilder Construction,

From: Andrew Murphy
Oversight Supervisor
Ecology and Environment, Inc.

Cc: Kevin Parrett, Project Manager, DEQ
Steve Campbell, Contract Manager, DEQ

Date: March 31, 2005

Re: Request for cost proposal for electrical supply modifications

Please provide E & E with a proposal, itemized separately, for the two items listed below. If accepted by E & E, these will be included in a deductive Change Order.

Item 1:

Provide PVC conduit (PVC-40) instead of Rigid Steel Conduit (RGS) and Plastic-Coated RGS from the meter main to the outside breaker box and beyond to the new shop building and connections to trailers. The work shall be subject to the following:

- All work shall be in accordance with the NEC.
- Locator tape shall be placed above all buried conduit.
- Conduit shall be placed below areas to be paved.
- As built drawings prepared by the Subcontractor shall show an accurate location of all subsurface conduit. The locations shall be determined either by topographic survey techniques or by swing ties from permanent features.
- All stub-ups and the short horizontal length between the meter main and the new paving shall be RGS (not plastic coated).

Item 2:

In the new Shop Building, all stub-ups and all conduit within 4 vertical feet of the final floor grade shall be RGS (not plastic coated). Conduit higher than 4 feet above the floor may be EMT.

Andrew Murphy
Date: 3/31/05

Received by:
Date: 3/31/05

ecology and environment, inc.
International Specialists in the Environment

333 Southwest Fifth Avenue, Suite 608
Portland, Oregon 97204
Tel: (503) 248-5600, Fax: (503) 248-5577

Support Facility Modifications
McCormick & Baxter Creosoting Co. Site

EE-WC-06

To: Pat Turina
Wilder Construction,

From: Gregory Jones
Oversight Supervisor
Ecology and Environment, Inc.

Cc: Kevin Parrett, Project Manager, DEQ
Steve Campbell, Contract Manager, DEQ
John Montgomery, Project Manager, E&E
Alexander Whitman, Project Engineer, E&E

Date: June 10, 2005

Re: Directive to fill the abandoned septic tank encountered during Support Facility Modification activities.

Wilder Construction is here by directed to fill the abandoned septic tank encountered during the Support Facility Modification activities on 6/8/05 with sand and to include its location on as-built drawings. This operation was approved by Kevin Parrett, the DEQ Project Manager on 6/8/05.

Gregory Jones
Date: 6/10/05

Received by:
Date: 6-10-05

ecology and environment, inc.
International Specialists in the Environment

333 Southwest Fifth Avenue, Suite 608
Portland, Oregon 97204
Tel: (503) 248-5600, Fax: (503) 248-5577

Support Facility Modifications
McCormick & Baxter Creosoting Co. Site

EE-WC-07

To: Pat Turina
Wilder Construction,

From: Gregory Jones
Oversight Supervisor
Ecology and Environment, Inc.

Cc: Kevin Parrett, Project Manager, DEQ
Steve Campbell, Contract Manager, DEQ
John Montgomery, Project Manager, E&E
Alexander Whitman, Project Engineer, E&E

Date: June 10, 2005

Re: Directive for the use of ¾" minus stone on Support Facility Pad instead of paving

Wilder Construction is directed to forgo the paving of the Support Facility Pad. The subcontract will be credited for the amount indicated on Wilders Construction breakdown of prices. Wilder shall perform grading of the Support Area Pad under the Upland Cap contract. Wilder shall install the chain link fence per the subcontract as soon as possible. Wilder also shall install the pole mounted luminary as soon as it becomes available.

Wilder shall place ¾" minus at the garage door of the new shop building to substitute for the asphalt ramp shown on the drawings. The ¾" minus shall be placed at the access ramp to the hazardous waste storage area to substitute for the asphalt ramp indicated on the drawings.

Gregory Jones
Date: 6/10/05

Received by:
Date: 6-10-05

McCORMICK and BAXTER SUPERFUND SITE
SUPPORT FACILITY MODIFICATIONS
SUBCONTRACT BETWEEN E & E and WILDER CONSTRUCTION
CHANGE ORDER NO. 1

The Contract Documents are hereby changed as follows.

1. Asphalt Paving

Asphalt Paving (Section 02510 of Specifications) is deleted from the subcontract. Periodic and final grading of the pad shall be performed under the Upland Cap contract.

2. Chain-Link Fence

Installation of new chain-link fence and reinstallation of existing chain-link fence (Section 02821 of Specifications) is deleted from the subcontract. The work will be performed under the Upland Cap contract.

3. Waste Holding Tank.

The existing waste holding tank shall be decontaminated with bleach and disposed of. A new tank, suitable for above ground storage of septic waste and capable of fitting beneath a trailer shall be furnished and connected.

4. Electrical Conduit.

In lieu of the plastic-coated Rigid Steel Conduit (RGS) specified in Section 16105, provide schedule 40 PVC conduit beneath the access road and pad. Additionally provide EMT conduit in the new shop building at elevations 4 feet and higher above the finished floor.

5. Garage Doors.

Prime-painted steel garage doors may be substituted for the corrosion resisting steel doors specified in Section 13120.

6. Lightning Protection.

Delete the requirement to furnish air terminals and cabling (Section 16601). The proximity of the luminaire obviates the need for air terminals.

7. Contract Price.

In accordance with the attached itemized list, the Contract Not-To-Exceed price is changed from $408,000.00 to $336,967.38.

McCORMICK and BAXTER
SUPPORT AREA MODIFICATIONS
CHANGE ORDER NO. 1
SCOPE OF WORK CHANGE

Item	Description	Price Increase	Price Decrease
1	Delete requirement to pave with asphalt		-$42,000.00
2	Delete requirement to provide chain-link fence		-$25,000.00
3	Provide New Sanitary Holding Tank beneath trailer with toilet. Chlorinate old holding tank and dispose.	$467.38	
4	Use PVC Conduit and bury conduit beneath access road. Use EMT in new shop at 4' and higher above Finished Floor elevation.		-$3,500.00
5	Provide primed non-corrosion resisting steel garage doors in lieu of CRES doors.		-$1,000.00
6	Increase in Reinforced Concrete Volume from 56 CY to 58.40 CY at the Bid Unit Price of $500.00/CY	$1,200.00	
7	Delete Air Terminals and cabling		-$1,200.00
	Basis Notes		
	(1) Based on Schedule of Values submitted by Wilder at start of job.		
	(2) Quote Provided by Wilder in e-mail. Wilder quote in e-mail 6/24/05 referencing www.quadel-i-i.com. Phone quote price confirmed $327.71 plus $71.76 freight to Portland.		
	(3) Wilder quote in e-mail 4/8/05		
	(4) Wilder Offer in e-mail		
	(5) Wilder Offer Verbal		
		$1,667.38	-$72,700.00
	Net Change to Contract	-$71,032.62	
	Contract Amount Before Change Order No. 1	$408,000.00	
	Final Contract Amount	$336,967.38	

D Daily Field Reports

ecology and environment, inc.

DAILY FIELD REPORT NO.: 1

Date: 03/29/05 **Day:** Tuesday

Project Title: McCormick and Baxter Facility Modifications **Client:** ODEQ

E & E Project No.: 001688.OY14.25

Weather		Temperature		Site Conditions	
Clear:		Morning:	45 °F	Clean:	x
Part Cldy:		Midday:	55 °F	Dusty:	
Overcast:		Afternoon:	55 °F	Muddy:	x
Rain:	x			Other:	
Fog:					
Snow:					
Other:					

CONTRACTOR(S)/SUBCONTRACTOR(S)

Contractor/Subcontractor	Crew Size	Remarks
Wilder Construction	1	Prime Contractor
Brothers Concrete Cutting	1	Cutting asphalt around new building and containment area.
David Evans and Associates	2	Survey and construction staking.
Locates Down Under	1	Underground utility locating and marking

VISITORS

Time In	Time Out	Name	Representing	Remarks
11:45	12:00	Richard Heymann	Accord Construction	Photos of the existing shop and tanks.
9:30	9:45	Cal Holglund	PGE	Inspection of transformers.
14:13	14:18	Ken Carlson	Bedford Construction	Site visit by contractor for concrete pours.

MAJOR EQUIPMENT CURRENTLY ON SITE	MATERIALS DELIVERED TO SITE
Trackhoe-Hitachi 135 Zaxis	
John Deere backhoe 310E with fork attachments	

NONCONFORMANCES NOTED	WHO WAS NOTIFIED?

SAFETY CONCERNS NOTED	WHO WAS NOTIFIED?

WORK COMPLETED

1. DEA surveyed and staked the construction alignment and features (building footprint and containment area footprint).
2. LDU marked the locations of the underground utilities within the support area and the location of the water supply line.
3. Wilder removed bollards, trees, and brush within the support area and along the access road. Trees and brush were stockpiled in a designated area to northwest of the contamination reduction zone off the asphalt. Pallets and sand bags were moved from the construction area to a designated location near previously stockpiled Bio-bags and fencing just to the west of the contamination reduction zone.
4. Brothers Concrete Cutting made cuts in the asphalt around the perimeter of the surveyed locations for the new building and containment area and around the new tire wash location.

NOTES/ISSUES

None

Prepared By: E & E Field Staff

ecology and environment, inc.

DAILY FIELD REPORT NO.: 2

Date: 03/30/05 **Day:** Wednesday

Project Title: McCormick and Baxter Facility Modifications **Client:** ODEQ

E & E Project No.: 001688.OY14.25

Weather		Temperature		Site Conditions	
Clear:		Morning:	45 °F	Clean:	x
Part Cldy:	x	Midday:	55 °F	Dusty:	
Overcast:		Afternoon:	55 °F	Muddy:	x
Rain:	x			Other:	
Fog:					
Snow:					
Other:					

CONTRACTOR(S)/SUBCONTRACTOR(S)

Contractor/Subcontractor	Crew Size	Remarks
Wilder Construction	2	Prime Contractor

VISITORS

Time In	Time Out	Name	Representing	Remarks
10:00	10:15	Ken Carlson	Bedford Construction	Site visit with superintendent
10:00	10:15	Todd Adair	Bedford Construction	Site visit with superintendent
12:00	14:20	Mike Fey	Wilder Construction	Weekly Meeting

MAJOR EQUIPMENT CURRENTLY ON SITE	MATERIALS DELIVERED TO SITE
Trackhoe-Hitachi 135 Zaxis	
John Deere backhoe 310E with fork attachments	

NONCONFORMANCES NOTED	WHO WAS NOTIFIED?

SAFETY CONCERNS NOTED	WHO WAS NOTIFIED?

WORK COMPLETED

1. Wilder Construction continued clearing and grubbing today along the west and southwest edge of the new support facility pavement area.
2. Wilder Construction excavated the footings and the sump for the shop building and the sump for the hazardous material containment area.
3. The first weekly meeting was held between E & E and Wilder Construction. E & E facilitated the meeting.

NOTES/ISSUES

1. Wilder Construction noted that the fiber optic markers appear to be within the access road. E & E called the Wiltel call before you dig phone number that is on the markers. The person in charge of marking was not available. E & E left a voicemail describing the situation and requested a call back.

Prepared By: E & E Field Staff

ecology and environment, inc.

DAILY FIELD REPORT NO.: 3

Date: 03/31/05 **Day:** Thursday

Project Title: McCormick and Baxter Facility Modifications **Client:** ODEQ

E & E Project No.: 001688.OY14.25

Weather		Temperature		Site Conditions	
Clear:		Morning:	45 °F	Clean:	x
Part Cldy:	x	Midday:	65 °F	Dusty:	
Overcast:		Afternoon:	55 °F	Muddy:	x
Rain:				Other:	
Fog:					
Snow:					
Other:					

CONTRACTOR(S)/SUBCONTRACTOR(S)

Contractor/Subcontractor	Crew Size	Remarks
Wilder Construction	2	Prime Contractor

VISITORS

Time In	Time Out	Name	Representing	Remarks

MAJOR EQUIPMENT CURRENTLY ON SITE	MATERIALS DELIVERED TO SITE
Trackhoe-Hitachi 135 Zaxis	
John Deere backhoe 310E with fork attachments	
Plate Compactor	

NONCONFORMANCES NOTED	WHO WAS NOTIFIED?
None noted.	

SAFETY CONCERNS NOTED	WHO WAS NOTIFIED?
None noted.	

WORK COMPLETED

1. Wilder Construction removed fencing and posts on the northeast, northwest, and southeast of the asphalt area and the fence between the contamination reductio zone and clean zone. Chain link fencing was rolled and stockpiled with other rolled fencing to the west of the asphalt area.

2. To allow for the excavation and installation of the new waterline, Wilder Construction moved the connex box and metal containment located on the southeast corner of the asphalt area a few feet to the east.

3. Wilder Construction temporarily moved the boot wash/decon area next to the existing tire wash. This location was chosen to allow use of the existing spigot.

4. Wilder Construction utilized a plate compactor to prepare the ground surface within the excavations for the shop buiding foundation footings and sumps.

5. In preparation for temporary relocation of decon trailer Wilder Construction disconnected the water supply and sewer and removed the jack stands. E & E and Wilder Construction agreed upon the temporary locations for the trailers. It will be to the south of their current location, which will allow easy connection to the power, phone lines, and satellite dish. Wilder Construction plans to use pallets that are stockpiled on-site to make a walk way from the clean zone to the trailer entrances.

NOTES/ISSUES

1. Wilder Construction noted yesterday that the fiber optic markers along the entrance to the site appear to be within the access road alignment. E & E called the Wiltel 'call before you dig phone number' that is on the markers after being informed of the situation. The person in charge of markers was not available. E & E left a voicemail requesting a call back. No call was received today. Therefore, E & E will attempt to contact them again tomorrow.

Prepared By: E & E Field Staff

ecology and environment, inc.

DAILY FIELD REPORT NO.: 4

Date: 04/01/05 **Day:** Friday

Project Title: McCormick and Baxter Facility Modifications **Client:** ODEQ

E & E Project No.: 001688.OY14.25

Weather		Temperature		Site Conditions	
Clear:		Morning:	45 °F	Clean:	x
Part Cldy:	x	Midday:	65 °F	Dusty:	
Overcast:		Afternoon:	55 °F	Muddy:	x
Rain:	x			Other:	
Fog:					
Snow:					
Other:					

CONTRACTOR(S)/SUBCONTRACTOR(S)

Contractor/Subcontractor	Crew Size	Remarks
Wilder Construction	2	Prime Contractor

VISITORS

Time In	Time Out	Name	Representing	Remarks
12:15	13:35	Mike Fey	Wider Construction	Inspection of existing electrical
12:15	13:35	Jim Unfriel (sp?)	Ampre Electric	Inspection of existing electrical
12:15	13:35	Steve Kenterburg	Ampre Electric	Inspection of existing electrical

MAJOR EQUIPMENT CURRENTLY ON SITE	MATERIALS DELIVERED TO SITE
Trackhoe-Hitachi 135 Zaxis	
John Deere backhoe 310E with fork attachments	
Plate Compactor	

NONCONFORMANCES NOTED	WHO WAS NOTIFIED?
None noted.	

SAFETY CONCERNS NOTED	WHO WAS NOTIFIED?
None noted.	

WORK COMPLETED

1. Wilder Construction exposed the water supply line at the location of the future connection and removed the structure around the existing backflow device.

2. In preparation for connecting temporary power to the trailers Wilder Construction exposed the buried service line to the west of the decon trailer and excavated a trench to the area where trailers will be temporarily located.

NOTES/ISSUES

1. E & E contacted Linda Rodgers of Wiltel about the fiber optic markers. They will require a site map of the road alignment and will be requesting a site visit to modify placement. She requested the map in a .pdf format and would like it emailed to her at Linda.rodgers@Wiltel.com. Furthermore, she would like us to contact their field personnel to arrange a site visit. Wilder's superintendent believes that they can work around the markers prior to paving.

Prepared By: E & E Field Staff

ecology and environment, inc.

DAILY FIELD REPORT NO.: 5

Date: 04/04/05 **Day:** Monday

Project Title: McCormick and Baxter Sediment Cap **Client:** ODEQ

E & E Project No.: 001688.OY14.25

Weather		Temperature		Site Conditions	
Clear:		Morning:	33 °F	Clean:	
Part Cldy:	x	Midday:	55 °F	Dusty:	
Overcast:		Afternoon:	50 °F	Muddy:	x
Rain:				Other:	
Fog:					
Snow:					
Other:					

CONTRACTOR(S)/SUBCONTRACTOR(S)

Contractor/Subcontractor	Crew Size	Remarks
Wilder	2	Prime Contractor
Ampere Electricity	3	Wilder's Electrical Contractor

VISITORS

Time In	Time Out	Name	Representing	Remarks
8:45	9:06	David Young	Utility Vault	Delivery
10:00	3:00	Jim Unfried	Ampere Electricity	Electrician
10:00	3:00	Rasta K. Walid	Ampere Electricity	Electrician
10:00	3:00	Steve Canterbury	Ampere Electricity	Electrician
10:40	11:45	Brad Erlandson	Morse Bros.	Delivery
11:28	1:05	Don	PAD Transportation	Move Trailers
10:24	11:05	Kevin C. Pegg (sp?)	HD Fowler	Delivery
12:00	12:30	George Lukert	Ecology and Environment	Inspection of marked utilities (MW-1s)

MAJOR EQUIPMENT CURRENTLY ON SITE	MATERIALS DELIVERED TO SITE
Excavator Hitachi Zaxis 135	Ductile Iron Pipe, fittings, gaskets, and lubrication
Backhoe John Deer 310 E	3/4" Gravel
	Utility Vault

NONCONFORMANCES NOTED	WHO WAS NOTIFIED?
None noted.	

SAFETY CONCERNS NOTED	WHO WAS NOTIFIED?
None noted.	

WORK COMPLETED

1. The two trailers were relocated to their new temporary location south of the support area just off the asphalt. Trailer A, the command post, was moved just of asphalt, and trailer B, the decon trailer, was moved approximately 100 ft off asphalt. Prior to being moved electricians disconnected the electricity. The electricity was reconnected once trailers were relocated. The internet satellite was disconnected prior to movement and reconnected after relocation.
2. Wilder continued excavating the trench for the new water service along the east edge of the property. Excavation began at the location where the new tie-in to the main line will occur and ended at the support area.
3. The service valve vault for the new water line was delivered to the east corner of the support area.
4. The 3/4"- (minus) gravel for backfill of the water line trench was delivered and stockpiled at the west edge of the support area on the asphalt.
5. The Ductile Iron pipe for the new water line was delivered and laid along the edge of trench currently being dug. The fittings and lubrication were also delivered and are located next to the trench near the support area.

NOTES/ISSUES

Wilder's Superintendent informed E & E that the main supply line is not 6" diameter pipe as indicated on the drawings, and may be 10 or 12 inches in diameter. Zander Whitman was informed. Wilder will have to obtain the correct diameter reducer to connect the new service. A change order for the new fitting will be required.

Prepared By: E & E Field Staff

ecology and environment, inc.

DAILY FIELD REPORT NO.: 6

Date: 04/05/05 **Day:** Tuesday

Project Title: McCormick and Baxter Support Facility Modifications **Client:** ODEQ

E & E Project No.: 001688.OY14.25

Weather		Temperature		Site Conditions	
Clear:		Morning:	35 °F	Clean:	
Part Cldy:	x	Midday:	50 °F	Dusty:	
Overcast:		Afternoon:	50 °F	Muddy:	x
Rain:				Other:	
Fog:					
Snow:					
Other:					

CONTRACTOR(S)/SUBCONTRACTOR(S)

Contractor/Subcontractor	Crew Size	Remarks
Wilder construction	3	The Prime Contractor

VISITORS

Time In	Time Out	Name	Representing	Remarks
9:15	9:40	Rod Cochran	Wiltel	fiber optic locator
3:00	4:55	Kevin Parrett	DEQ	site walk
10:40	12:30	Gary (?) A. DeVoll	Phillips Alarm	alarm system

MAJOR EQUIPMENT CURRENTLY ON SITE	MATERIALS DELIVERED TO SITE
Excavator Hitachi Zaxis 135	water tank for decontamination while water is turned off
Backhoe John Deer 310E	

NONCONFORMANCES NOTED	WHO WAS NOTIFIED?
None noted.	

SAFETY CONCERNS NOTED	WHO WAS NOTIFIED?
None noted.	

WORK COMPLETED

1. Work continued on the new water line today. The trenching was completed. The 3/4" (minus) bedding was placed, and most of the ductile iron pipe was installed. Exposed piping was covered with 3/4"backfill to protect the pipe. Joints were left exposed until the pressure testing takes place. Ends of the exposed pipe were covered with geotextile fabric and duct taped in place.

2. Wiltel fiber optic employee, Rod Cochran, visited the site and marked the location of the fiber optic cable. He also gave permission for the removal of marker near entrance gate of the site.

3. The alarm system was reconfigured for the temporary location of the trailers and is operational in a limited capacity. Currently the system alarms are operational for the command post trailer and the shop building. The decon trailer was connected to the system with a phone line that was cut to allow movemen and will not be operational until it is relocated onto the asphalt.

NOTES/ISSUES

None

Prepared By: E & E Field Staff

ecology and environment, inc.

DAILY FIELD REPORT NO.: 7

Date: 04/06/05 **Day:** Wednesday

Project Title: McCormick and Baxter Support Facility Modifications **Client:** ODEQ

E & E Project No.: 001688.OY14.25

Weather		Temperature		Site Conditions	
Clear:		Morning:	35 °F	Clean:	x
Part Cldy:	x	Midday:	50 °F	Dusty:	
Overcast:		Afternoon:	50 °F	Muddy:	
Rain:				Other:	
Fog:					
Snow:					
Other:					

CONTRACTOR(S)/SUBCONTRACTOR(S)

Contractor/Subcontractor	Crew Size	Remarks
Wilder construction	3	The Prime Contractor

VISITORS

Time In	Time Out	Name	Representing	Remarks
9:15				
3:00				
10:40				

MAJOR EQUIPMENT CURRENTLY ON SITE	MATERIALS DELIVERED TO SITE
Excavator Hitachi Zaxis 135	The rebar for the foundation of the building and the containment area
Backhoe John Deer 310E	The service valve and reducer fitting
	Morse Bros. delivered more 3/4"-minus rock

NONCONFORMANCES NOTED	WHO WAS NOTIFIED?
None noted.	

SAFETY CONCERNS NOTED	WHO WAS NOTIFIED?
None noted.	

WORK COMPLETED

1. Wilder Construction backfilled 300-feet of the pipe trench with 3/4-minus rock and installed the service valve today.
2. The second weekly progress meeting was conducted.

NOTES/ISSUES

None

Prepared By: E & E Field Staff

ecology and environment, inc.

DAILY FIELD REPORT NO.: 8

Date: 04/07/05 **Day:** Thursday

Project Title: McCormick and Baxter Support Facility Modifications **Client:** ODEQ

E & E Project No.: 001688.OY14.25

Weather		Temperature		Site Conditions	
Clear:		Morning:	52 °F	Clean:	
Part Cldy:		Midday:	52 °F	Dusty:	
Overcast:	x	Afternoon:	54 °F	Muddy:	x
Rain:	x			Other:	
Fog:					
Snow:					
Other:					

CONTRACTOR(S)/SUBCONTRACTOR(S)

Contractor/Subcontractor	Crew Size	Remarks
Wilder construction	3	The prime contractor
Artic Plumbing	2	Plumbing contractor
Bedford Construction	3	Contractor for concrete structures

VISITORS

Time In	Time Out	Name	Representing	Remarks
9:04	10:00	Jerry Cowger	Sprint Telephone Co.	Repair telephone service
12:25	12;30	Tony Enevoldson	Speedy Glass	Measurements to repair trailer windows

MAJOR EQUIPMENT CURRENTLY ON SITE	MATERIALS DELIVERED TO SITE
Excavator Hitachi Zaxis 135	The rebar for the foundation of the building and the containment area
Backhoe John Deer 310E	
Grater CAT 140H	

NONCONFORMANCES NOTED	WHO WAS NOTIFIED?
None noted.	

SAFETY CONCERNS NOTED	WHO WAS NOTIFIED?
None noted.	

WORK COMPLETED

1. Wilder Construction completed the installation of the backflow prevention device onto the reconfigured waterline per detail 3/3 of drawing # 4.
2. Artic Plumbing completed the installation of the 6"auxillary gate valve on the main water line per detail 1/3.
3. Bedford Construction constructed forms for the concrete footings and installed the batter boards.

NOTES/ISSUES

None

Prepared By: E & E Field Staff

ecology and environment, inc.

DAILY FIELD REPORT NO.: 9

Date: 04/08/05 **Day:** Friday

Project Title: McCormick and Baxter Support Facility Modifications **Client:** ODEQ

E & E Project No.: 001688.OY14.25

Weather		Temperature		Site Conditions	
Clear:		Morning:	49 °F	Clean:	
Part Cldy:		Midday:	51 °F	Dusty:	
Overcast:	x	Afternoon:	51 °F	Muddy:	x
Rain:	x			Other:	
Fog:					
Snow:					
Other:					

CONTRACTOR(S)/SUBCONTRACTOR(S)

Contractor/Subcontractor	Crew Size	Remarks
Wilder construction	3	The Prime Contractor - Departed the site early today due to a previous arrangement
Bedford Construction	3	Wilder's subcontractor for the concrete structures

VISITORS

Time In	Time Out	Name	Representing	Remarks
12:16	12:45	Louis Naeyth	East Jordan Iron Works Inc.	Delivery of drainage grates

MAJOR EQUIPMENT CURRENTLY ON SITE	MATERIALS DELIVERED TO SITE
Excavator Hitachi Zaxis 135	12 Drainage Grates
Backhoe John Deer 310E	
Grater CAT 140H	

NONCONFORMANCES NOTED	WHO WAS NOTIFIED?
None noted.	

SAFETY CONCERNS NOTED	WHO WAS NOTIFIED?
None noted.	

WORK COMPLETED

1. The thrust blocks for the fire hydrant and backflow prevention device were poured today by Wilder Construction. Thrust blocks are hydraulic displacement prevention structures that transfer the hydraulic hammer loads to competent undisturbed soil. The configuration and size are determined by the type of: connection or appurtanance, and soil that will be acting as the bearing surface.
2. Additionally, Wilder Construction compleed the installation of the concrete pad beneath the 6"auxillary gate valve on the reconfigured waterline per detail 1/3 of the design drawings.
3. Bedford Construction completed the necessary concrete forms for the building footings and installed approximately one thrid of the rebar.

NOTES/ISSUES

None

Prepared By: E & E Field Staff

ecology and environment, inc.

DAILY FIELD REPORT NO.: 12

Date: 04/13/05 **Day:** Wednesday

Project Title: McCormick and Baxter Support Facility Modifications **Client:** ODEQ

E & E Project No.: 001688.OY14.25

Weather		Temperature		Site Conditions	
Clear:		Morning:	48 °F	Clean:	
Part Cldy:	x	Midday:	50 °F	Dusty:	
Overcast:		Afternoon:	54 °F	Muddy:	x
Rain:	x			Other:	
Fog:					
Snow:					
Other:					

CONTRACTOR(S)/SUBCONTRACTOR(S)

Contractor/Subcontractor	Crew Size	Remarks
Wilder Construction	3	Prime Contractor
Ross Island Sand & Gravel	1	Concrete Sub-Contractor
Bedford Construction	4	Building Sub-Contractor

VISITORS

Time In	Time Out	Name	Representing	Remarks

MAJOR EQUIPMENT CURRENTLY ON SITE	MATERIALS DELIVERED TO SITE
Excavator Hitachi Zaxis 135	
Backhoe John Deer 310E	
Vibromax Roller	
Grader CAT 140H	

NONCONFORMANCE NOTED	WHO WAS NOTIFIED?
None noted.	

SAFETY CONCERNS NOTED	WHO WAS NOTIFIED?
None noted.	

WORK COMPLETED

1. Wilder removed 6-feet of fence at the site entrance to allow for the construction of the entrance road. Orange construction fence is being utilized as a temporary barrier.
2. Wilder completed the installation of the waterline.
3. Bedford Construction poured concrete into the forms of the six footings and piers for the building.

NOTES/ISSUES

None

Prepared By: E & E Field Staff

ecology and environment, inc.

DAILY FIELD REPORT NO.: 13

Date: 04/14/05 **Day:** Thursday

Project Title: McCormick and Baxter Support Facility Modifications **Client:** ODEQ

E & E Project No.: 001688.OY14.25

Weather		Temperature		Site Conditions	
Clear:		Morning:	45 °F	Clean:	
Part Cldy:	x	Midday:	53 °F	Dusty:	
Overcast:		Afternoon:	56 °F	Muddy:	x
Rain:	x			Other:	
Fog:					
Snow:					
Other:					

CONTRACTOR(S)/SUBCONTRACTOR(S)

Contractor/Subcontractor	Crew Size	Remarks
Wilder Construction	3	Prime Contractor
Bedford Construction	2	Wilder's subcontractor for concrete structures

VISITORS

Time In	Time Out	Name	Representing	Remarks

MAJOR EQUIPMENT CURRENTLY ON SITE	MATERIALS DELIVERED TO SITE
Backhoe John Deer 310E	743.66 tons of 1"1/2 select fill (24 loads)
Vibromax Roller	
CAT 140H Crater	

NONCONFORMANCE NOTED	WHO WAS NOTIFIED?
None noted.	

SAFETY CONCERNS NOTED	WHO WAS NOTIFIED?
None noted.	

WORK COMPLETED

1. Wilder Construction continued installation of select fill material over the existing asphalt parking area today.
2. Bedford Construction removed the wooden forms from the building footings and piers and performed necessary finish work.

NOTES/ISSUES

None

Prepared By: E & E Field Staff

ecology and environment, inc.

DAILY FIELD REPORT NO.: 14

Date: 04/15/05 **Day:** Friday

Project Title: McCormick and Baxter Support Facility Modifications **Client:** ODEQ

E & E Project No.: 001688.OY14.25

Weather		Temperature		Site Conditions	
Clear:		Morning:	45 °F	Clean:	
Part Cldy:		Midday:	51 °F	Dusty:	
Overcast:	x	Afternoon:	58 °F	Muddy:	x
Rain:	x			Other:	
Fog:					
Snow:					
Other:					

CONTRACTOR(S)/SUBCONTRACTOR(S)

Contractor/Subcontractor	Crew Size	Remarks
Wilder Construction	3	Prime Contractor
Anctil Plumbing	1	Wilder's plumbing subcontractor
Morse Bros, Inc.	5	Fill, base coarse, and concrete vendor for Wilder

VISITORS

Time In	Time Out	Name	Representing	Remarks

MAJOR EQUIPMENT CURRENTLY ON SITE	MATERIALS DELIVERED TO SITE
Backhoe John Deer 310E	1083.27 tons of 1"1/2 select fill (34 loads)
Vibromax Roller	
CAT 140H Grader	

NONCONFORMANCE NOTED	WHO WAS NOTIFIED?
None noted.	

SAFETY CONCERNS NOTED	WHO WAS NOTIFIED?
None noted.	

WORK COMPLETED

1. Wilder Construction continued to installation of select fill material; 80% of the existing asphalt is covered.
2. Anctil Plumbing completed the hydrostatic test on the water line with hydrant installed. Results were acceptable.

NOTES/ISSUES

None

Prepared By: E & E Field Staff

ecology and environment, inc.

DAILY FIELD REPORT NO.: 15

Date: 04/18/05 **Day:** Monday

Project Title: McCormick and Baxter Support Facility Modifications **Client:** ODEQ

E & E Project No.: 001688.OY14.25

Weather		Temperature		Site Conditions	
Clear:		Morning:	47 °F	Clean:	
Part Cldy:	x	Midday:	50 °F	Dusty:	
Overcast:		Afternoon:	56 °F	Muddy:	x
Rain:				Other:	
Fog:					
Snow:					
Other:					

CONTRACTOR(S)/SUBCONTRACTOR(S)

Contractor/Subcontractor	Crew Size	Remarks
Wilder Construction	3	Prime Contractor
MBI	5	Wilder's base coarse, select fill, and concrete vendor.

VISITORS

Time In	Time Out	Name	Representing	Remarks
7:30	7:50	Mark Rier	Wilder Construction	Audit Wilders Site Safety Meeting

MAJOR EQUIPMENT CURRENTLY ON SITE	MATERIALS DELIVERED TO SITE
Backhoe John Deer 310E	1037.57 tons of 1"1/2 select fill (33 loads)
Vibromax Roller	
CAT 140H Crater	

NONCONFORMANCE NOTED	WHO WAS NOTIFIED?
None noted.	

SAFETY CONCERNS NOTED	WHO WAS NOTIFIED?
None noted.	

WORK COMPLETED

1. Wilder Construction placed and graded the 1-1/2-inch minus base coarse from the site entrance to 30' north of STA. 5+00.
2. Wilder Construction backfilled and compacted the excavation to the newly constructed footings and piers with 1-1/2-inch minus fill.

NOTES/ISSUES

None

Prepared By: E & E Field Staff

ecology and environment, inc.

DAILY FIELD REPORT NO.: 16

Date: 04/19/05 **Day:** Tuesday

Project Title: McCormick and Baxter Support Facility Modifications **Client:** ODEQ

E & E Project No.: 001688.OY14.25

Weather		Temperature		Site Conditions	
Clear:	x	Morning:	40 °f	Clean:	
Part Cldy:	x	Midday:	59 °F	Dusty:	
Overcast:		Afternoon:	61 °F	Muddy:	x
Rain:				Other:	
Fog:					
Snow:					
Other:					

CONTRACTOR(S)/SUBCONTRACTOR(S)

Contractor/Subcontractor	Crew Size	Remarks
Wilder Construction	3	Prime Contractor
Curtis Specialty Welding	2	Subcontractor

VISITORS

Time In	Time Out	Name	Representing	Remarks

MAJOR EQUIPMENT CURRENTLY ON SITE	MATERIALS DELIVERED TO SITE
Backhoe John Deer 310E	329.35 tons of 1"1/2 select fill (10 loads); 61.63 tons of 3/4 "0" crushed rock (2 loads); 32.98 tons of sand (1 load)
Vibromax Roller	
CAT 140H Grader	
John Deere 50 C Excavator	

NONCONFORMANCE NOTED	WHO WAS NOTIFIED?
None noted.	

SAFETY CONCERNS NOTED	WHO WAS NOTIFIED?
None noted.	

WORK COMPLETED

1. Wilder Construction completed the fill around the shop building area with 1-1/2-inch minus fill.
2. Curtis Specialty Welding extended the riser pipe on the east and west flush mounted monitoring wells. The risers are now above the project height of the building slab.

NOTES/ISSUES

None

Prepared By: E & E Field Staff

ecology and environment, inc.

DAILY FIELD REPORT NO.: 17

Date: 04/20/05 **Day:** Wednesday

Project Title: McCormick and Baxter Support Facility Modifications **Client:** ODEQ

E & E Project No.: 001688.OY14.25

Weather		Temperature		Site Conditions	
Clear:	x	Morning:	46 °f	Clean:	
Part Cldy:		Midday:	67 °F	Dusty:	
Overcast:		Afternoon:	72 °F	Muddy:	
Rain:				Other:	x
Fog:					
Snow:					
Other:					

CONTRACTOR(S)/SUBCONTRACTOR(S)

Contractor/Subcontractor	Crew Size	Remarks
Wilder Construction	3	Prime Contractor
Carlson Testing	1	Subcontractor

VISITORS

Time In	Time Out	Name	Representing	Remarks
12:30		John Montgomery	Ecology and Environment, Inc.	Weekly Progress Meeting
11:00		Alexander Whitman	Ecology and Environment, Inc.	Weekly Progress Meeting
13:00	14:00	Pat Turina	Wilder Construction Co.	Weekly Progress Meeting

MAJOR EQUIPMENT CURRENTLY ON SITE	MATERIALS DELIVERED TO SITE
Backhoe John Deer 310E	None
Vibromax Roller	
CAT 140H Crater	
John Deere 50 C Excavator	

NONCONFORMANCE NOTED	WHO WAS NOTIFIED?
None noted.	

SAFETY CONCERNS NOTED	WHO WAS NOTIFIED?
None noted.	

WORK COMPLETED

1. Wilder Construction used a bulldozer with ripping teeth to cut furrows in previously placed select fill. This operation is an attempt to facilitate drying becauseselect fill to remove excessive moisture.
2. Wilder Construction excavated 300' of the utilities trench for the electrical and telephone service. Installed 6" of sand bedding.
3. Carlson Testing, Inc. conducted compaction test on the installed 1"1/2 select fill at three locations
4. Conducted Weekly Progress Meeting

NOTES/ISSUES

Select fill is not meeting conpaction requirements due to excessive moisture retention. The select fill appears to have too much silt and clay and is not free draining.

Prepared By: E & E Field Staff

ecology and environment, inc.

DAILY FIELD REPORT NO.: 18

Date: 04/21/05 **Day:** Thursday

Project Title: McCormick and Baxter Support Facility Modifications **Client:** ODEQ

E & E Project No.: 001688.OY14.25

Weather		Temperature		Site Conditions	
Clear:		Morning:	48 °f	Clean:	x
Part Cldy:	x	Midday:	56 °F	Dusty:	
Overcast:		Afternoon:	70 °F	Muddy:	
Rain:				Other:	
Fog:					
Snow:					
Other:					

CONTRACTOR(S)/SUBCONTRACTOR(S)

Contractor/Subcontractor	Crew Size	Remarks
Wilder Construction	3	Prime Contractor
Anctil Plumbing	1	Subcontractor
Midnight Electric Co.	2	Subcontractor

VISITORS

Time In	Time Out	Name	Representing	Remarks
8:45	14:10	Andrew Murphy	Ecology and Environment, Inc.	Cap Assessment
11:30	11:45	Mike Fay	Wilder Construction Co.	Site Visit
12:45	13:00	Carl Fergurson	Skyline Telephone	Telephone Line Repair

MAJOR EQUIPMENT CURRENTLY ON SITE	MATERIALS DELIVERED TO SITE
Backhoe John Deer 310E	31.16 tons of sand
Vibromax Roller	
CAT 140H Grader	
John Deere 50 C Excavator	

NONCONFORMANCE NOTED	WHO WAS NOTIFIED?
None noted.	

SAFETY CONCERNS NOTED	WHO WAS NOTIFIED?
None noted.	

WORK COMPLETED

1. Wilder Construction placed, graded, and compacted a 6-inch thick lift of 3/4" minus crushed rock in the shop building area to act as a base coarse for the concrete slab.
2. Wilder Construction completed the excavation of the trenches for buried utilities for the shop building and support trailers (phone, water supply, and power).
3. Anctil Plumbing installed the water service piping from the main water supply line to the shop building, eyewash location, and the trailer location.
4. Midnight Electric Co. began installing underground electrical and telephone conduit.

NOTES/ISSUES

None

Prepared By: E & E Field Staff

ecology and environment, inc.

DAILY FIELD REPORT NO.: 20

Date: 04/22/05 **Day:** Friday

Project Title: McCormick and Baxter Support Facility Modifications **Client:** ODEQ

E & E Project No.: 001688.OY14.25

Weather		Temperature		Site Conditions	
Clear:		Morning:	52 °f	Clean:	
Part Cldy:		Midday:	60 °F	Dusty:	
Overcast:	x	Afternoon:	60 °F	Muddy:	x
Rain:	x			Other:	
Fog:					
Snow:					
Other:					

CONTRACTOR(S)/SUBCONTRACTOR(S)

Contractor/Subcontractor	Crew Size	Remarks
Wilder Construction	3	Prime Contractor

VISITORS

Time In	Time Out	Name	Representing	Remarks

MAJOR EQUIPMENT CURRENTLY ON SITE	MATERIALS DELIVERED TO SITE
Backhoe John Deer 310E	
Vibromax Roller	
CAT 140H Crater	
John Deere 50 C Excavator	

NONCONFORMANCE NOTED	WHO WAS NOTIFIED?
None noted.	

SAFETY CONCERNS NOTED	WHO WAS NOTIFIED?
None noted.	

WORK COMPLETED

1. None

NOTES/ISSUES

Due to the heavy rain and high moisture content of the 1-1/2-minus select fill Wilder Construction decided not to disturb the material until tomorrow as weather conditions are expected to improved.

Prepared By: E & E Field Staff

ecology and environment, inc.

DAILY FIELD REPORT NO.: 21

Date: 04/26/05 **Day:** Tuesday

Project Title: McCormick and Baxter Support Facility Modifications **Client:** ODEQ

E & E Project No.: 001688.OY14.25

Weather		Temperature		Site Conditions	
Clear:	x PM	Morning:	52 °f	Clean:	
Part Cldy:		Midday:	68 °F	Dusty:	
Overcast:	x AM	Afternoon:	72 °F	Muddy:	x
Rain:				Other:	
Fog:	x AM				
Snow:					
Other:					

CONTRACTOR(S)/SUBCONTRACTOR(S)

Contractor/Subcontractor	Crew Size	Remarks
Wilder Construction	3	Prime Contractor

VISITORS

Time In	Time Out	Name	Representing	Remarks

MAJOR EQUIPMENT CURRENTLY ON SITE			MATERIALS DELIVERED TO SITE
Backhoe John Deer 310E	operated	6-Hours	None
Vibromax Roller			
CAT 140H Grader	operated	4-Hours	
John Deere 50 C Excavator			

NONCONFORMANCE NOTED	WHO WAS NOTIFIED?
None noted.	

SAFETY CONCERNS NOTED	WHO WAS NOTIFIED?
None noted.	

WORK COMPLETED

1. Wilder Construction filled the electric and telephone utility trenches to existing grade. The underground utilities are a minimum of one-foot bgs.
2. Wilder Construction excavated the perimeter of the shop building footprint in preparation for the installation of the concrete forms and batter boards.

NOTES/ISSUES

None

Prepared By: E & E Field Staff

ecology and environment, inc.

DAILY FIELD REPORT NO.: 22

Date: 04/27/05 **Day:** Wednesday

Project Title: McCormick and Baxter Support Facility Modifications **Client:** ODEQ

E & E Project No.: 001688.OY14.25

Weather		Temperature		Site Conditions	
Clear:	x	Morning:	52 °f	Clean:	x
Part Cldy:		Midday:	69 °F	Dusty:	
Overcast:		Afternoon:	73 °F	Muddy:	
Rain:				Other:	
Fog:					
Snow:					
Other:					

CONTRACTOR(S)/SUBCONTRACTOR(S)

Contractor/Subcontractor	Crew Size	Remarks
Wilder Construction	2	Prime Contractor
Bedford Construction	4	Subcontractor

VISITORS

Time In	Time Out	Name	Representing	Remarks
11:45	12:00	Jim Rimbert	City of Portland	Electrical Conduit Inspection

MAJOR EQUIPMENT CURRENTLY ON SITE		MATERIALS DELIVERED TO SITE
Backhoe John Deer 310E		None
Vibromax Roller	approximat 2-Hours	
CAT 140H Grader	approximat 2-Hours	
John Deere 50 C Excavator		

NONCONFORMANCE NOTED	WHO WAS NOTIFIED?
None noted.	

SAFETY CONCERNS NOTED	WHO WAS NOTIFIED?
None noted.	

WORK COMPLETED

1. Bedford Construction began the installation of the wooden forms, batter boards, and rebar for the shop building concrete slab.
2. Wilder Construction excavated the location for the base luminaries light pole.
3. Wilder Construction re-graded the 1-1/2-minus select fill over the entire site.

NOTES/ISSUES

Progress Meeting # 5 conducted today.

Prepared By: E & E Field Staff

ecology and environment, inc.

DAILY FIELD REPORT NO.: 23

Date: 04/28/05 **Day:** Thursday

Project Title: McCormick and Baxter Support Facility Modifications **Client:** ODEQ

E & E Project No.: 001688.OY14.25

Weather		Temperature		Site Conditions	
Clear:		Morning:	53 °f	Clean:	x
Part Cldy:	x	Midday:	60 °F	Dusty:	
Overcast:		Afternoon:	64 °F	Muddy:	
Rain:				Other:	
Fog:					
Snow:					
Other:					

CONTRACTOR(S)/SUBCONTRACTOR(S)

Contractor/Subcontractor	Crew Size	Remarks
Wilder Construction	2	Prime Contractor
Bedford Construction	4	Subcontractor

VISITORS

Time In	Time Out	Name	Representing	Remarks

MAJOR EQUIPMENT CURRENTLY ON SITE		MATERIALS DELIVERED TO SITE
Backhoe John Deer 310E	approximat 1-hour	None
Vibromax Roller	approximat 7-Hours	
CAT 140H Grater	approximat 2-Hours	
John Deere 50 C Excavator		

NONCONFORMANCE NOTED	WHO WAS NOTIFIED?
None noted.	

SAFETY CONCERNS NOTED	WHO WAS NOTIFIED?
None noted.	

WORK COMPLETED

1. Wilder Construction completed the installation of the rebar and reinforcements for the shop building concrete slab.
2. Wilder Construction installed the 3'x3'x 6" wooden form for the backflow prevention device concrete pad.
3. Wilder Construction used the vibratory roller to re-compact the 1-1/2-inch minus select fill previously ripped in an attempt to facilitate drying.

NOTES/ISSUES

The current plan is to pour both concrete pad for the shop building and the pad for the backflow prevention device on Friday April 29th, weather permitting.

Prepared By: E & E Field Staff

ecology and environment, inc.

DAILY FIELD REPORT NO.: 24

Date: 04/29/05 **Day:** Friday

Project Title: McCormick and Baxter Support Facility Modifications **Client:** ODEQ

E & E Project No.: 001688.OY14.25

Weather		Temperature		Site Conditions	
Clear:		Morning:	52 °f	Clean:	x
Part Cldy:		Midday:	58 °F	Dusty:	
Overcast:	x	Afternoon:	63 °F	Muddy:	
Rain:				Other:	
Fog:					
Snow:					
Other:					

CONTRACTOR(S)/SUBCONTRACTOR(S)

Contractor/Subcontractor	Crew Size	Remarks
Wilder Construction	0	Prime Contractor
Bedford Construction	4	Subcontractor

VISITORS

Time In	Time Out	Name	Representing	Remarks
10:51	11:12	Bill Bean	City Of Portland	Existing Utilities Locations

MAJOR EQUIPMENT CURRENTLY ON SITE		MATERIALS DELIVERED TO SITE
Backhoe John Deer 310E	0- Hours	None
Vibromax Roller	0-Hours	
CAT 140H Grader	0-Hours	
John Deere 50 C Excavator	0-Hours	

NONCONFORMANCE NOTED	WHO WAS NOTIFIED?
None noted.	

SAFETY CONCERNS NOTED	WHO WAS NOTIFIED?
None noted.	

WORK COMPLETED

1. Bedford Construction began the installation of the concrete forms, batter boards, and rebar for the hazardous containment area.

NOTES/ISSUES

Due to expected rain Wilder Construction revised their schedule for pouring the concrete for the shop building's slab to Monday May 2, 2005.

Prepared By: E & E Field Staff

ecology and environment, inc.

DAILY FIELD REPORT NO.: 25

Date: 05/02/05 **Day:** Monday

Project Title: McCormick and Baxter Support Facility Modifications **Client:** ODEQ

E & E Project No.: 001688.OY14.25

Weather		Temperature		Site Conditions	
Clear:		Morning:	52 °f	Clean:	x
Part Cldy:	x	Midday:	58 °F	Dusty:	
Overcast:		Afternoon:	63 °F	Muddy:	
Rain:				Other:	
Fog:					
Snow:					
Other:					

CONTRACTOR(S)/SUBCONTRACTOR(S)

Contractor/Subcontractor	Crew Size	Remarks
Wilder Construction	4	Prime Contractor
Bedford Construction	7	Subcontractor
Ross Island Sand & Gravel	3	Subcontractor
Carlson Testing, Inc	1	Subcontractor

VISITORS

Time In	Time Out	Name	Representing	Remarks

MAJOR EQUIPMENT CURRENTLY ON SITE		MATERIALS DELIVERED TO SITE
Backhoe John Deer 310E	0- Hours	27cubic yards of concrete
Vibromax Roller	0-Hours	
CAT 140H Grater	0-Hours	
John Deere 50 C Excavator	2-Hours	

NONCONFORMANCE NOTED	WHO WAS NOTIFIED?
None noted.	

SAFETY CONCERNS NOTED	WHO WAS NOTIFIED?
None noted.	

WORK COMPLETED

1. Bedford Construction completed the concrete pour of the slab for the shop building.
2. Carlson Testing, Inc. cast one set of three cylinders to test the concrete properties and conformance to the project specifications.
3. Wilder Construction excavated the location for the new tire wash area within the new support area.

NOTES/ISSUES

None

Prepared By: E & E Field Staff

ecology and environment, inc.

DAILY FIELD REPORT NO.: 26

Date: 05/03/05 **Day:** Tuesday

Project Title: McCormick and Baxter Support Facility Modifications **Client:** ODEQ

E & E Project No.: 001688.OY14.25

Weather		Temperature		Site Conditions	
Clear:	x	Morning:	49 °f	Clean:	x
Part Cldy:		Midday:	65 °F	Dusty:	
Overcast:		Afternoon:	70 °F	Muddy:	
Rain:				Other:	
Fog:					
Snow:					
Other:					

CONTRACTOR(S)/SUBCONTRACTOR(S)

Contractor/Subcontractor	Crew Size	Remarks
Wilder Construction	3	Prime Contractor
Bedford Construction	5	Subcontractor

VISITORS

Time In	Time Out	Name	Representing	Remarks

MAJOR EQUIPMENT CURRENTLY ON SITE		MATERIALS DELIVERED TO SITE
Backhoe John Deer 310E	0- Hours	None
Vibromax Roller	6-Hours	
CAT 140H Grater	2-Hours	
John Deere 50 C Excavator	0-Hours	

NONCONFORMANCE NOTED	WHO WAS NOTIFIED?
None noted.	

SAFETY CONCERNS NOTED	WHO WAS NOTIFIED?
None noted.	

WORK COMPLETED

1. Bedford Construction removed the forms and batter boards for the shop building concrete slab.
2. Bedford Construction began the installation of the forms, batter boards, and the rebar for the concrete of the hazardous containment area.
3. Wilder Construction re-graded and re-compacted the 1-1/2-inch select fill material in another attempt to lower the moisture content and reach the required compaction.

NOTES/ISSUES

None

Prepared By: E & E Field Staff

ecology and environment, inc.

DAILY FIELD REPORT NO.: 27

Date: 05/04/05 **Day:** Wednesday

Project Title: McCormick and Baxter Support Facility Modifications **Client:** ODEQ

E & E Project No.: 001688.OY14.25

Weather		Temperature		Site Conditions	
Clear:	x	Morning:	51 °f	Clean:	x
Part Cldy:	x	Midday:	60 °F	Dusty:	
Overcast:		Afternoon:	67 °F	Muddy:	
Rain:				Other:	
Fog:					
Snow:					
Other:					

CONTRACTOR(S)/SUBCONTRACTOR(S)

Contractor/Subcontractor	Crew Size	Remarks
Wilder Construction	3	Prime Contractor
Bedford Construction	4	Subcontractor

VISITORS

Time In	Time Out	Name	Representing	Remarks

MAJOR EQUIPMENT CURRENTLY ON SITE		MATERIALS DELIVERED TO SITE
Backhoe John Deer 310E	0- Hours	None
Vibromax Roller	0-Hours	
CAT 140H Grader	0-Hours	
John Deere 50 C Excavator	0-Hours	

NONCONFORMANCE NOTED	WHO WAS NOTIFIED?
None noted.	

SAFETY CONCERNS NOTED	WHO WAS NOTIFIED?
None noted.	

WORK COMPLETED

1. Bedford Construction installed rebar and bracing for the forms for the hazardous materials storage area

NOTES/ISSUES

Progress Meeting # 6 was held.

Prepared By: E & E Field Staff

ecology and environment, inc.

DAILY FIELD REPORT NO.: 28

Date: 05/05/05 **Day:** Thursday

Project Title: McCormick and Baxter Support Facility Modifications **Client:** ODEQ

E & E Project No.: 001688.OY14.25

Weather		Temperature		Site Conditions	
Clear:		Morning:	60 °f	Clean:	x
Part Cldy:		Midday:	64 °F	Dusty:	
Overcast:	x	Afternoon:	70 °F	Muddy:	
Rain:				Other:	
Fog:					
Snow:					
Other:					

CONTRACTOR(S)/SUBCONTRACTOR(S)

Contractor/Subcontractor	Crew Size	Remarks
Wilder Construction	3	Prime Contractor
Bedford Construction	4	Subcontractor

VISITORS

Time In	Time Out	Name	Representing	Remarks

MAJOR EQUIPMENT CURRENTLY ON SITE		MATERIALS DELIVERED TO SITE
Backhoe John Deer 310E	0- Hours	None
Vibromax Roller	0-Hours	
CAT 140H Grater	0-Hours	
John Deere 50 C Excavator	0-Hours	

NONCONFORMANCE NOTED	WHO WAS NOTIFIED?
None noted.	

SAFETY CONCERNS NOTED	WHO WAS NOTIFIED?
None noted.	

WORK COMPLETED

1. Bedford Construction completed the installation of the concrete forms for the luminaries base.
2. Bedford Construction completed installation of the wooden and metal form bracings for the hazardous storage area.

NOTES/ISSUES

The concrete pour for the Hazardous Storage Pad and the Luminaries base is scheduled for tomorrow.

Prepared By: E & E Field Staff

ecology and environment, inc.

DAILY FIELD REPORT NO.: 29

Date: 05/06/05 **Day:** Friday

Project Title: McCormick and Baxter Support Facility Modifications **Client:** ODEQ

E & E Project No.: 001688.OY14.25

Weather		Temperature		Site Conditions	
Clear:		Morning:	60 °f	Clean:	x
Part Cldy:		Midday:	64 °F	Dusty:	
Overcast:	x	Afternoon:	70 °F	Muddy:	
Rain:				Other:	
Fog:					
Snow:					
Other:					

CONTRACTOR(S)/SUBCONTRACTOR(S)

Contractor/Subcontractor	Crew Size	Remarks
Wilder Construction	3	Prime Contractor
Bedford Construction	8	Concrete Subcontractor
Ampere Electrical	2	Electrical Subcontractor
Carlson Testing	1	Concrete testing contractor

VISITORS

Time In	Time Out	Name	Representing	Remarks

MAJOR EQUIPMENT CURRENTLY ON SITE		MATERIALS DELIVERED TO SITE
Backhoe John Deer 310E	0- Hours	Bolts for the Luminaries base
Vibromax Roller	0-Hours	Four truckloads of concrete
CAT 140H Grater	0-Hours	
John Deere 50 C Excavator	0-Hours	

NONCONFORMANCE NOTED	WHO WAS NOTIFIED?
None noted.	

SAFETY CONCERNS NOTED	WHO WAS NOTIFIED?
None noted.	

WORK COMPLETED

1. Bedford Construction completed the concrete installation for the hazardous materials storage area.
2. Wilder Construction completed the pad for the backflow prevention device.

NOTES/ISSUES

The bolts for the luminaries base are 3-feet long, which is approximately 10-inches too long for the designed base. E & E and Wilder have determined that the most cost effective and structural sound solution would be to dig down to the preconstruction ground surface elevation below the base. Extra time and effort will be required by Wilder and their subcontractor for removing the forms and rebar, excavating, and resetting everything. The extra time and effort will be determined on Monday.

Prepared By: E & E Field Staff

ecology and environment, inc.

DAILY FIELD REPORT NO.: 30

Date: 05/09/05 **Day:** Monday

Project Title: McCormick and Baxter Support Facility Modifications **Client:** ODEQ

E & E Project No.: 001688.OY14.25

Weather		Temperature		Site Conditions	
Clear:		Morning:	55 °f	Clean:	
Part Cldy:		Midday:	60 °F	Dusty:	
Overcast:		Afternoon:	60 °F	Muddy:	x
Rain:	x			Other:	
Fog:					
Snow:					
Other:					

CONTRACTOR(S)/SUBCONTRACTOR(S)

Contractor/Subcontractor	Crew Size	Remarks
Wilder Construction	3	Prime Contractor
Bedford Construction	3	Concrete Subcontractor

VISITORS

Time In	Time Out	Name	Representing	Remarks

MAJOR EQUIPMENT CURRENTLY ON SITE	MATERIALS DELIVERED TO SITE
Backhoe John Deer 310E 0- Hours	
John Deere 50 C Excavator 0-Hours	

NONCONFORMANCE NOTED	WHO WAS NOTIFIED?
None noted.	

SAFETY CONCERNS NOTED	WHO WAS NOTIFIED?
None noted.	

WORK COMPLETED

1. Bedford Construction removed the remaining forms for the hazardous material containment area; removed and reset the Luminaries form base after the Wilder construction modified its depth for the 36-inch long bolts; and set the forms for the wheel wash.

NOTES/ISSUES

None

Prepared By: E & E Field Staff

ecology and environment, inc.

DAILY FIELD REPORT NO.: 31

Date: 05/10/05 **Day:** Tuesday

Project Title: McCormick and Baxter Support Facility Modifications **Client:** ODEQ

E & E Project No.: 001688.OY14.25

Weather		Temperature		Site Conditions	
Clear:		Morning:	55 °f	Clean:	
Part Cldy:		Midday:	60 °F	Dusty:	
Overcast:		Afternoon:	60 °F	Muddy:	x
Rain:	x			Other:	
Fog:					
Snow:					
Other:					

CONTRACTOR(S)/SUBCONTRACTOR(S)

Contractor/Subcontractor	Crew Size	Remarks
Wilder Construction	3	No work was performed on this contract.

VISITORS

Time In	Time Out	Name	Representing	Remarks

MAJOR EQUIPMENT CURRENTLY ON SITE	MATERIALS DELIVERED TO SITE
Backhoe John Deer 310E 0- Hours	
John Deere 50 C Excavator 0-Hours	

NONCONFORMANCE NOTED	WHO WAS NOTIFIED?
None noted.	

SAFETY CONCERNS NOTED	WHO WAS NOTIFIED?
None noted.	

WORK COMPLETED

1. No work was performed on this contract today

NOTES/ISSUES

None

Prepared By:

ecology and environment, inc.

DAILY FIELD REPORT NO.: 32

Date: 05/11/05 **Day:** Wednesday

Project Title: McCormick and Baxter Support Facility Modifications **Client:** ODEQ

E & E Project No.: 001688.OY14.25

Weather		Temperature		Site Conditions	
Clear:		Morning:	55 °f	Clean:	
Part Cldy:		Midday:	60 °F	Dusty:	
Overcast:		Afternoon:	60 °F	Muddy:	x
Rain:	x			Other:	
Fog:					
Snow:					
Other:					

CONTRACTOR(S)/SUBCONTRACTOR(S)

Contractor/Subcontractor	Crew Size	Remarks
Wilder Construction	3	Wilder did not work on this contract today.
Bedford	3	Wilder's concrete subcontractor

VISITORS

Time In	Time Out	Name	Representing	Remarks

MAJOR EQUIPMENT CURRENTLY ON SITE	MATERIALS DELIVERED TO SITE
Backhoe John Deer 310E 0- Hours	
John Deere 50 C Excavator 0-Hours	

NONCONFORMANCE NOTED	WHO WAS NOTIFIED?
None noted.	

SAFETY CONCERNS NOTED	WHO WAS NOTIFIED?
None noted.	

WORK COMPLETED

1. Bedford completed finish work on the hazardous containment area and installed rebar for the wheel wash today.

NOTES/ISSUES

None

Prepared By:

ecology and environment, inc.

DAILY FIELD REPORT NO.: 33

Date: 05/12/05 **Day:** Thursday

Project Title: McCormick and Baxter Support Facility Modifications **Client:** ODEQ

E & E Project No.: 001688.OY14.25

Weather		Temperature		Site Conditions	
Clear:	x	Morning:	60 °f	Clean:	
Part Cldy:	x	Midday:	70 °F	Dusty:	
Overcast:		Afternoon:	75 °F	Muddy:	x
Rain:				Other:	
Fog:					
Snow:					
Other:					

CONTRACTOR(S)/SUBCONTRACTOR(S)

Contractor/Subcontractor	Crew Size	Remarks
Wilder Construction	3	Wilder did not work on this contract today.
Bedford	3	Wilder's concrete subcontractor

VISITORS

Time In	Time Out	Name	Representing	Remarks

MAJOR EQUIPMENT CURRENTLY ON SITE		MATERIALS DELIVERED TO SITE
Backhoe John Deer 310E	0- Hours	
John Deere 50 C Excavator	0-Hours	

NONCONFORMANCE NOTED	WHO WAS NOTIFIED?
None noted.	

SAFETY CONCERNS NOTED	WHO WAS NOTIFIED?
None noted.	

WORK COMPLETED

1. Bedford poured the concrete for the Luminaries base and the wheel wash toda

NOTES/ISSUES

None

Prepared By: A. Murphy

ecology and environment, inc.

DAILY FIELD REPORT NO.: 40

Date: 05/23/05 **Day:** Monday

Project Title: McCormick and Baxter Support Facility Modifications **Client:** ODEQ

E & E Project No.: 001688.OY14.25

Weather		Temperature		Site Conditions	
Clear:		Morning:	47 °f	Clean:	
Part Cldy:	x	Midday:	60 °F	Dusty:	
Overcast:		Afternoon:	68 °F	Muddy:	x
Rain:				Other:	
Fog:	x				
Snow:					
Other:					

CONTRACTOR(S)/SUBCONTRACTOR(S)

Contractor/Subcontractor	Crew Size	Remarks
Wilder Construction	3	

VISITORS

Time In	Time Out	Name	Representing	Remarks

MAJOR EQUIPMENT CURRENTLY ON SITE			MATERIALS DELIVERED TO SITE
Backhoe John Deer 310E	4	hours	
Genie Lift (Munitor)	0	hours	
Backhoe Case 580 (Munitor)	0	hours	
Hyster 210 Forklift	0	hours	
450 Cat bulldozer	3.5	hours	
John Deere 50 C Excavator	0	hours	

NONCONFORMANCE NOTED	WHO WAS NOTIFIED?
None noted.	

SAFETY CONCERNS NOTED	WHO WAS NOTIFIED?
None noted.	

WORK COMPLETED

Wilder Construction removed the sand bags and plastic from the support facility cap and ripped the select fill material with the bulldozer in yet another attempt to assist to dry the select fill material.

NOTES/ISSUES

None

Prepared By: G. Jones

ecology and environment, inc.

DAILY FIELD REPORT NO.: 41

Date: 05/24/05 **Day:** Tuesday

Project Title: McCormick and Baxter Support Facility Modifications **Client:** ODEQ

E & E Project No.: 001688.OY14.25

Weather		Temperature		Site Conditions	
Clear:		Morning:	50 °f	Clean:	
Part Cldy:	x	Midday:	66 °F	Dusty:	
Overcast:		Afternoon:	72 °F	Muddy:	x
Rain:				Other:	
Fog:					
Snow:					
Other:					

CONTRACTOR(S)/SUBCONTRACTOR(S)

Contractor/Subcontractor	Crew Size	Remarks
Wilder Construction	1	

VISITORS

Time In	Time Out	Name	Representing	Remarks

MAJOR EQUIPMENT CURRENTLY ON SITE			MATERIALS DELIVERED TO SITE
Backhoe John Deer 310E		hours	
Genie Lift (Munitor)	0	hours	
Ingresol Rand SD 100D Rolle	1.5	hours	
Hyster 210 Forklift	0	hours	
450 Cat bulldozer	3	hours	
John Deere 50 C Excavator	0	hours	

NONCONFORMANCE NOTED	WHO WAS NOTIFIED?
None noted.	

SAFETY CONCERNS NOTED	WHO WAS NOTIFIED?
None noted.	

WORK COMPLETED

Wilder Construction ripped and re-graded more of the select fill material in the support area in an attempt increase drying of the material. Wilder installed orange temporary construction fencing as demarcation fabric between existing site soils and 'clean' cap material.

NOTES/ISSUES

None

Prepared By: G. Jones

ecology and environment, inc.

DAILY FIELD REPORT NO.: 42

Date: 05/25/05 **Day:** Wednesday

Project Title: McCormick and Baxter Support Facility Modifications **Client:** ODEQ

E & E Project No.: 001688.OY14.25

Weather		Temperature		Site Conditions	
Clear:	x	Morning:	51 °f	Clean:	x
Part Cldy:		Midday:	78 °F	Dusty:	
Overcast:		Afternoon:	85 °F	Muddy:	
Rain:				Other:	
Fog:					
Snow:					
Other:					

CONTRACTOR(S)/SUBCONTRACTOR(S)

Contractor/Subcontractor	Crew Size	Remarks
Wilder Construction	1	

VISITORS

Time In	Time Out	Name	Representing	Remarks

MAJOR EQUIPMENT CURRENTLY ON SITE			MATERIALS DELIVERED TO SITE
Backhoe John Deer 310E	3	hours	
Genie Lift (Munitor)	0	hours	
Ingresoll Rand SD 100D Rolle	4	hours	
Hyster 210 Forklift	0	hours	
450 Cat bulldozer	3	hours	
John Deere 50 C Excavator	0	hours	

NONCONFORMANCE NOTED	WHO WAS NOTIFIED?
None noted.	

SAFETY CONCERNS NOTED	WHO WAS NOTIFIED?
None noted.	

WORK COMPLETED

1.Ampere Electric installed the electrical meter box and connected the conduit to it.
2. Wilder Construction ripped and re-graded the select fill material again today.
3. Wilder completed the installation of the demarcation fabri

NOTES/ISSUES

None Noted

Prepared By: G. Jones

ecology and environment, inc.

DAILY FIELD REPORT NO.: 45

Date: 05/31/05 **Day:** Tuesday

Project Title: McCormick and Baxter Support Facility Modifications **Client:** ODEQ

E & E Project No.: 001688.OY14.25

Weather		Temperature		Site Conditions	
Clear:		Morning:	62 °f	Clean:	x
Part Cldy:		Midday:	66 °F	Dusty:	
Overcast:	x	Afternoon:	69 °F	Muddy:	
Rain:	x			Other:	
Fog:					
Snow:					
Other:					

CONTRACTOR(S)/SUBCONTRACTOR(S)

Contractor/Subcontractor	Crew Size	Remarks
Wilder Construction	3	

VISITORS

Time In	Time Out	Name	Representing	Remarks

MAJOR EQUIPMENT CURRENTLY ON SITE			MATERIALS DELIVERED TO SITE
Backhoe John Deer 310E	4	hours	A total of 287.65 tons of 3/4"stone delivered to site.
Genie Lift (Munitor)	0	hours	
Ingresoll Rand SD 100D Roll	3.5	hours	
Hyster 210 Forklift	0	hours	
450 Cat bulldozer	7.5	hours	
John Deere 50 C Excavator	0	hours	

NONCONFORMANCE NOTED	WHO WAS NOTIFIED?
None noted.	

SAFETY CONCERNS NOTED	WHO WAS NOTIFIED?
None noted.	

WORK COMPLETED

1. Wilder Construction installed the remaining 3/4 " minus stone on the cap and parking area. Wilder also compacted and graded the 3/4 " minus.

NOTES/ISSUES

None Noted

Prepared By: G. Jones

ecology and environment, inc.

DAILY FIELD REPORT NO.: 46

Date: 06/01/05 **Day:** Wednesday

Project Title: McCormick and Baxter Support Facility Modifications **Client:** ODEQ

E & E Project No.: 001688.OY14.25

Weather		Temperature		Site Conditions	
Clear:		Morning:	52 °f	Clean:	
Part Cldy:	x	Midday:	57 °F	Dusty:	
Overcast:	x	Afternoon:	62 °F	Muddy:	x
Rain:	x			Other:	
Fog:					
Snow:					
Other:					

CONTRACTOR(S)/SUBCONTRACTOR(S)

Contractor/Subcontractor	Crew Size	Remarks
Wilder Construction	4	

VISITORS

Time In	Time Out	Name	Representing	Remarks
11:10	12:40	John Montgomery	Ecology and Environment, Inc.	Meeting
11:05	12:40	Kevin Parrett	DEQ	Meeting
11:30	12:40	Steve Campbell	DEQ	Meeting

MAJOR EQUIPMENT CURRENTLY ON SITE			MATERIALS DELIVERED TO SITE
Backhoe John Deer 310E	4	hours	A total of 96.28 tons of 3/4"stone delivered (3-truck loads)
Caterpillar CB224P Roller	6.75	hours	
Ingell Rand SD 100D Roller	1	hours	
Hyster 210 Forklift	0	hours	
450 Cat bulldozer	7.5	hours	
John Deere 50 C Excavator	0	hours	

NONCONFORMANCE NOTED	WHO WAS NOTIFIED?
None noted.	

SAFETY CONCERNS NOTED	WHO WAS NOTIFIED?
None noted.	

WORK COMPLETED

1. Wilder Construction placed, graded, and performed compactive effoıthe site entrance road

NOTES/ISSUES

Wilder experiencing difficulty grading the stone due to the poor condition of the select fill material beneath. The select fill is too high in moisture.

Prepared By: G. Jones

ecology and environment, inc.

DAILY FIELD REPORT NO.: 49

Date: 06/06/05 **Day:** Monday

Project Title: McCormick and Baxter Support Facility Modifications **Client:** ODEQ

E & E Project No.: 001688.OY14.25

Weather		Temperature		Site Conditions	
Clear:		Morning:	54 °f	Clean:	
Part Cldy:	x	Midday:	67 °F	Dusty:	
Overcast:	x	Afternoon:	74 °F	Muddy:	x
Rain:	x			Other:	
Fog:					
Snow:					
Other:					

CONTRACTOR(S)/SUBCONTRACTOR(S)

Contractor/Subcontractor	Crew Size	Remarks
Ampere Electric Co.	2	Wilder's electrical subcontractor

VISITORS

Time In	Time Out	Name	Representing	Remarks

MAJOR EQUIPMENT CURRENTLY ON SITE			MATERIALS DELIVERED TO SITE
Backhoe John Deer 310E	0	hours	None
Caterpillar CB224P Roller	0	hours	
Ingell Rand SD 100D Roller	0	hours	
Hyster 210 Forklift	0	hours	
450 Cat bulldozer	0	hours	
John Deere 50 C Excavator	0	hours	

NONCONFORMANCE NOTED	WHO WAS NOTIFIED?
None noted.	

SAFETY CONCERNS NOTED	WHO WAS NOTIFIED?
None noted.	

WORK COMPLETED

1. Ampere Electric Co. pulled elecrical wire through underground condiut for service to the site trailers.

NOTES/ISSUES

None noted

Prepared By: G. Jones

ecology and environment, inc.

DAILY FIELD REPORT NO.: 50

Date: 06/07/05 **Day:** Tuesday

Project Title: McCormick and Baxter Support Facility Modifications **Client:** ODEQ

E & E Project No.: 001688.OY14.25

Weather		Temperature		Site Conditions	
Clear:		Morning:	50 °f	Clean:	
Part Cldy:	x	Midday:	56 °F	Dusty:	
Overcast:	x	Afternoon:	64 °F	Muddy:	x
Rain:	x			Other:	
Fog:					
Snow:					
Other:					

CONTRACTOR(S)/SUBCONTRACTOR(S)

Contractor/Subcontractor	Crew Size	Remarks
Ampere Electric Co.	2	Wilder's electrical subcontractor
Wilder Construction	0	Prime Contractor

VISITORS

Time In	Time Out	Name	Representing	Remarks

MAJOR EQUIPMENT CURRENTLY ON SITE			MATERIALS DELIVERED TO SITE
Backhoe John Deer 310E	0	hours	None
Caterpillar CB224P Roller	0	hours	
Ingresoll Rand SD 100D Roller	0	hours	
Hyster 210 Forklift	0	hours	
450 Cat bulldozer	0	hours	
John Deere 50 C Excavator	0	hours	

NONCONFORMANCE NOTED	WHO WAS NOTIFIED?
None noted.	

SAFETY CONCERNS NOTED	WHO WAS NOTIFIED?
None noted.	

WORK COMPLETED

1. Ampere Electric Co. continued installation of the electrical panels and meters. PGE completed electrical drop from new utility poles.

NOTES/ISSUES

None noted

Prepared By: G. Jones

ecology and environment, inc.

DAILY FIELD REPORT NO.: 51

Date: 06/08/05 **Day:** Wednesday

Project Title: McCormick and Baxter Support Facility Modifications **Client:** ODEQ

E & E Project No.: 001688.OY14.25

Weather		Temperature		Site Conditions	
Clear:	x	Morning:	50 °f	Clean:	
Part Cldy:		Midday:	56 °F	Dusty:	x
Overcast:		Afternoon:	74 °F	Muddy:	
Rain:				Other:	
Fog:					
Snow:					
Other:					

CONTRACTOR(S)/SUBCONTRACTOR(S)

Contractor/Subcontractor	Crew Size	Remarks
Ampere Electric Co.	2	None
Wilder Construction	0	None

VISITORS

Time In	Time Out	Name	Representing	Remarks
13:10		Kevin Parrett	DEQ	Weekly Progress Meetings
11:00		Alexander Whitman	Ecology And Environment, Inc.	Weekly Progress Meetings
13:30		Chad Nancarrow	Ecology And Environment, Inc.	Weekly Progress Meetings

MAJOR EQUIPMENT CURRENTLY ON SITE			MATERIALS DELIVERED TO SITE
Backhoe John Deer 310E	0	hours	None
Caterpillar CB224P Roller	0	hours	
Ingresoll Rand SD 100D Roller	0	hours	
Hyster 210 Forklift	0	hours	
450 Cat bulldozer	0	hours	
John Deere 50 C Excavator	0	hours	

NONCONFORMANCE NOTED	WHO WAS NOTIFIED?
None noted.	

SAFETY CONCERNS NOTED	WHO WAS NOTIFIED?
None noted.	

WORK COMPLETED

1. Ampere Electric Co. completed the installation of electrical service to the site trailers. (No other work performed)

NOTES/ISSUES

Weekly Progress Meeting conducted today.

Prepared By: G. Jones

ecology and environment, inc.

DAILY FIELD REPORT NO.: 60

Date: 06/21/05 **Day:** Tuesday

Project Title: McCormick and Baxter Support Facility Modifications **Client:** ODEQ

E & E Project No.: 001688.OY14.25

Weather		Temperature		Site Conditions	
Clear:	x	Morning:	62 °f	Clean:	
Part Cldy:	x	Midday:	78 °F	Dusty:	x
Overcast:		Afternoon:	83 °F	Muddy:	
Rain:				Other:	
Fog:					
Snow:					
Other:					

CONTRACTOR(S)/SUBCONTRACTOR(S)

Contractor/Subcontractor	Crew Size	Remarks
Wilder Construction	0	None
SMC Building Erectors	2	None

VISITORS

Time In	Time Out	Name	Representing	Remarks
9:30	11:30	Erin Hale	Ecology and Environment, Inc.	Operations and Maintenance

MAJOR EQUIPMENT CURRENTLY ON SITE			MATERIALS DELIVERED TO SITE
Genie Manlift	5	hours	None
Gradall 534B	3	hours	
Ingresoll Rand SD 100D Roller	0	hours	
Hyster 210 Forklift	0	hours	
450 Cat bulldozer	0	hours	
John Deere 50 C Excavator	0	hours	

NONCONFORMANCE NOTED	WHO WAS NOTIFIED?
None noted.	

SAFETY CONCERNS NOTED	WHO WAS NOTIFIED?
None noted.	

WORK COMPLETED

1. SMC Building Erectors installed the building corner posts and side beams with bracing.

NOTES/ISSUES

None

Prepared By: G. Jones

ecology and environment, inc.

DAILY FIELD REPORT NO.: 61

Date: 06/22/05 **Day:** Wednesday

Project Title: McCormick and Baxter Support Facility Modifications **Client:** ODEQ

E & E Project No.: 001688.OY14.25

Weather		Temperature		Site Conditions	
Clear:		Morning:	59 °f	Clean:	x
Part Cldy:		Midday:	66 °F	Dusty:	
Overcast:	x	Afternoon:	70 °F	Muddy:	
Rain:	x			Other:	
Fog:					
Snow:					
Other:					

CONTRACTOR(S)/SUBCONTRACTOR(S)

Contractor/Subcontractor	Crew Size	Remarks
Wilder Construction	0	None
SMC Building Erectors	2	None

VISITORS

Time In	Time Out	Name	Representing	Remarks
11:45		Steve Campbell	ODEQ	Weekly Progress Meeting
11:45		Kevin Parrett	ODEQ	Weekly Progress Meeting
10:15		Alexander Whitman	E&E	Weekly Progress Meeting

MAJOR EQUIPMENT CURRENTLY ON SITE			MATERIALS DELIVERED TO SITE
Genie Man lift	6	hours	None
Gradall 534B	4	hours	
Ingresoll Rand SD 100D Roller	0	hours	
Hyster 210 Forklift	0	hours	
450 Cat bulldozer	0	hours	
John Deere 50 C Excavator	0	hours	

NONCONFORMANCE NOTED	WHO WAS NOTIFIED?
None noted.	

SAFETY CONCERNS NOTED	WHO WAS NOTIFIED?
None noted.	

WORK COMPLETED

1. SMC Building Erectors installed the girders and rafters for the shop building roof.

NOTES/ISSUES

None

Prepared By: G. Jones

ecology and environment, inc.

DAILY FIELD REPORT NO.: 62

Date: 06/23/05 **Day:** Thursday

Project Title: McCormick and Baxter Support Facility Modifications **Client:** ODEQ

E & E Project No.: 001688.OY14.25

Weather		Temperature		Site Conditions	
Clear:	x	Morning:	60 °f	Clean:	
Part Cldy:		Midday:	65 °F	Dusty:	x
Overcast:		Afternoon:	70 °F	Muddy:	
Rain:				Other:	
Fog:					
Snow:					
Other:					

CONTRACTOR(S)/SUBCONTRACTOR(S)

Contractor/Subcontractor	Crew Size	Remarks
Ampere Electric Co.	4	None
SMC Building Erectors	2	None

VISITORS

Time In	Time Out	Name	Representing	Remarks
10:50	2:45	Alexander Whitman	Ecology and Environment, Inc.	Site Inspection

MAJOR EQUIPMENT CURRENTLY ON SITE			MATERIALS DELIVERED TO SITE
Genie Man lift	7.5	hours	None
Gradall 534B	6	hours	
Ingell Rand SD 100D Roller	0	hours	
Hyster 210 Forklift	0	hours	
450 Cat bulldozer	0	hours	
John Deere 50 C Excavator	0	hours	

NONCONFORMANCE NOTED	WHO WAS NOTIFIED?
None noted.	

SAFETY CONCERNS NOTED	WHO WAS NOTIFIED?
None noted.	

WORK COMPLETED

1. SMC Building Erectors continued building erection.
2. Ampere electric installed luminaries pole and light.

NOTES/ISSUES

None

Prepared By: G. Jones

ecology and environment, inc.

DAILY FIELD REPORT NO.: 63

Date: 06/24/05 **Day:** Friday

Project Title: McCormick and Baxter Support Facility Modifications **Client:** ODEQ

E & E Project No.: 001688.OY14.25

Weather		Temperature		Site Conditions	
Clear:	x	Morning:	57 °f	Clean:	
Part Cldy:	x	Midday:	64 °F	Dusty:	x
Overcast:		Afternoon:	74 °F	Muddy:	
Rain:				Other:	
Fog:					
Snow:					
Other:					

CONTRACTOR(S)/SUBCONTRACTOR(S)

Contractor/Subcontractor	Crew Size	Remarks
Anctil Plumbing	1	None
SMC Building Erectors	2	None

VISITORS

Time In	Time Out	Name	Representing	Remarks

MAJOR EQUIPMENT CURRENTLY ON SITE			MATERIALS DELIVERED TO SITE
Genie Man lift	5.5	hours	None
Gradall 534B	3	hours	
Ingresoll Rand SD 100D Roller	0	hours	
Hyster 210 Forklift	0	hours	
450 Cat bulldozer	0	hours	
John Deere 50 C Excavator	0	hours	

NONCONFORMANCE NOTED	WHO WAS NOTIFIED?
None noted.	

SAFETY CONCERNS NOTED	WHO WAS NOTIFIED?
None noted.	

WORK COMPLETED

1. SMC Building Erectors installed 50% of shop building roof panels.
2. Anctil Plumbing installed eyewash and pressure reducing valve on the water supply line

NOTES/ISSUES

None

Prepared By: G. Jones

ecology and environment, inc.

DAILY FIELD REPORT NO.: 64

Date: 06/27/05 **Day:** Monday

Project Title: McCormick and Baxter Support Facility Modifications **Client:** ODEQ

E & E Project No.: 001688.OY14.25

Weather		Temperature		Site Conditions	
Clear:		Morning:	58 °f	Clean:	
Part Cldy:		Midday:	62 °F	Dusty:	
Overcast:	x	Afternoon:	67 °F	Muddy:	x
Rain:	x			Other:	
Fog:					
Snow:					
Other:					

CONTRACTOR(S)/SUBCONTRACTOR(S)

Contractor/Subcontractor	Crew Size	Remarks
SMC Building Erectors	2	None

VISITORS

Time In	Time Out	Name	Representing	Remarks

MAJOR EQUIPMENT CURRENTLY ON SITE			MATERIALS DELIVERED TO SITE
Genie Man lift	3	hours	septic tank (under trailer)
Gradall 534B	1	hours	
Ingresoll Rand SD 100D Roller	0	hours	
Hyster 210 Forklift	0	hours	
450 Cat bulldozer	0	hours	
John Deere 50 C Excavator	0	hours	

NONCONFORMANCE NOTED	WHO WAS NOTIFIED?
None noted.	

SAFETY CONCERNS NOTED	WHO WAS NOTIFIED?
None noted.	

WORK COMPLETED

1. SMC Building Erectors completed installation of the shop building roof panels.

NOTES/ISSUES

None

Prepared By: G. Jones

ecology and environment, inc.

DAILY FIELD REPORT NO.: 65

Date: 06/28/05 **Day:** Tuesday

Project Title: McCormick and Baxter Support Facility Modifications **Client:** ODEQ

E & E Project No.: 001688.OY14.25

Weather		Temperature		Site Conditions	
Clear:		Morning:	60 °f	Clean:	x
Part Cldy:		Midday:	65 °F	Dusty:	
Overcast:	x	Afternoon:	70 °F	Muddy:	
Rain:				Other:	
Fog:					
Snow:					
Other:					

CONTRACTOR(S)/SUBCONTRACTOR(S)

Contractor/Subcontractor	Crew Size	Remarks
SMC Building Erectors	2	Wilder's subcontractor

VISITORS

Time In	Time Out	Name	Representing	Remarks

MAJOR EQUIPMENT CURRENTLY ON SITE			MATERIALS DELIVERED TO SITE
Genie Man lift	2	hours	none
Gradall 534B	0	hours	
Ingresoll Rand SD 100D Roller	0	hours	
Hyster 210 Forklift	0	hours	
450 Cat bulldozer	0	hours	
John Deere 50 C Excavator	0	hours	

NONCONFORMANCE NOTED	WHO WAS NOTIFIED?
None noted.	

SAFETY CONCERNS NOTED	WHO WAS NOTIFIED?
None noted.	

WORK COMPLETED

1. SMC Building Erectors completed installation of the east wall of the shop building and both man doors.

NOTES/ISSUES

None

Prepared By: G. Jones

ecology and environment, inc.

DAILY FIELD REPORT NO.: 67

Date: 06/30/05 **Day:** Thursday

Project Title: McCormick and Baxter Support Facility Modifications **Client:** ODEQ

E & E Project No.: 001688.OY14.25

Weather		Temperature		Site Conditions	
Clear:	x	Morning:	61 °f	Clean:	x
Part Cldy:		Midday:	71 °F	Dusty:	
Overcast:		Afternoon:	80 °F	Muddy:	
Rain:				Other:	
Fog:					
Snow:					
Other:					

CONTRACTOR(S)/SUBCONTRACTOR(S)

Contractor/Subcontractor	Crew Size	Remarks
SMC Building Erectors	2	None
Ampere Electric Co.	4	

VISITORS

Time In	Time Out	Name	Representing	Remarks

MAJOR EQUIPMENT CURRENTLY ON SITE			MATERIALS DELIVERED TO SITE
Genie Man lift	0	hours	none
Gradall 534B	0	hours	
Ingresoll Rand SD 100D Roller	0	hours	
Hyster 210 Forklift	0	hours	
450 Cat bulldozer	0	hours	
John Deere 50 C Excavator	0	hours	

NONCONFORMANCE NOTED	WHO WAS NOTIFIED?
None noted.	

SAFETY CONCERNS NOTED	WHO WAS NOTIFIED?
None noted.	

WORK COMPLETED

1. SMC installed the frames for the building louvers.
2. Ampere Electric began installation of the shop building electrical components.

NOTES/ISSUES

E&E directed Wilder to have SMC personnel install a tarp covering over the unfinished portion of the roof to protect the insulation and materials staged on the shop floor.

Prepared By: G. Jones

ecology and environment, inc.

DAILY FIELD REPORT NO.: 68

Date: 07/01/05 **Day:** Friday

Project Title: McCormick and Baxter Support Facility Modifications **Client:** ODEQ

E & E Project No.: 001688.OY14.25

Weather		Temperature		Site Conditions	
Clear:	x	Morning:	60 °f	Clean:	x
Part Cldy:		Midday:	70 °F	Dusty:	
Overcast:		Afternoon:	80 °F	Muddy:	
Rain:				Other:	
Fog:					
Snow:					
Other:					

CONTRACTOR(S)/SUBCONTRACTOR(S)

Contractor/Subcontractor	Crew Size	Remarks
SMC Building Erectors	2	None
Ampere Electric Co.	0	

VISITORS

Time In	Time Out	Name	Representing	Remarks

MAJOR EQUIPMENT CURRENTLY ON SITE			MATERIALS DELIVERED TO SITE
Genie Man lift	6	hours	none

NONCONFORMANCE NOTED	WHO WAS NOTIFIED?
None noted.	

SAFETY CONCERNS NOTED	WHO WAS NOTIFIED?
None noted.	

WORK COMPLETED

1. SMC worked on installation of building skin.

NOTES/ISSUES

None

Prepared By: J. Petersen

ecology and environment, inc.

DAILY FIELD REPORT NO.: 69

Date: 07/05/05 **Day:** Tuesday

Project Title: McCormick and Baxter Support Facility Modifications **Client:** ODEQ

E & E Project No.: 001688.OY14.25

Weather		Temperature		Site Conditions	
Clear:	x	Morning:	65 °f	Clean:	x
Part Cldy:		Midday:	80 °F	Dusty:	
Overcast:		Afternoon:	85 °F	Muddy:	
Rain:				Other:	
Fog:					
Snow:					
Other:					

CONTRACTOR(S)/SUBCONTRACTOR(S)

Contractor/Subcontractor	Crew Size	Remarks
SMC Building Erectors	2	None
Ampere Electric Co.	4	

VISITORS

Time In	Time Out	Name	Representing	Remarks

MAJOR EQUIPMENT CURRENTLY ON SITE	MATERIALS DELIVERED TO SITE

NONCONFORMANCE NOTED	WHO WAS NOTIFIED?
None noted.	

SAFETY CONCERNS NOTED	WHO WAS NOTIFIED?
None noted.	

WORK COMPLETED

1. SMC continued installing insulation and building skin.
2. Ampere Electric worked on installation of Kindorf for electrical conduit supports, the interior light fixtures, and the interior electrical panel.

NOTES/ISSUES

None

Prepared By: J. Petersen

ecology and environment, inc.

DAILY FIELD REPORT NO.: 70

Date: 07/06/05 **Day:** Wednesday

Project Title: McCormick and Baxter Support Facility Modifications **Client:** ODEQ

E & E Project No.: 001688.OY14.25

Weather		Temperature		Site Conditions	
Clear:	x	Morning:	55 °f	Clean:	x
Part Cldy:		Midday:	65 °F	Dusty:	
Overcast:		Afternoon:	80 °F	Muddy:	
Rain:				Other:	
Fog:					
Snow:					
Other:					

CONTRACTOR(S)/SUBCONTRACTOR(S)

Contractor/Subcontractor	Crew Size	Remarks
SMC Building Erectors	2	None
Ampere Electric Co.	0	

VISITORS

Time In	Time Out	Name	Representing	Remarks

MAJOR EQUIPMENT CURRENTLY ON SITE	MATERIALS DELIVERED TO SITE

NONCONFORMANCE NOTED	WHO WAS NOTIFIED?
None noted.	

SAFETY CONCERNS NOTED	WHO WAS NOTIFIED?
None noted.	

WORK COMPLETED

1. SMC personnel worked on final trim and fastener installation, caulking, and drains.

NOTES/ISSUES

None

Prepared By: J. Petersen

ecology and environment, inc.

DAILY FIELD REPORT NO.: 71

Date: 07/11/05 **Day:** Monday

Project Title: McCormick and Baxter Support Facility Modifications **Client:** ODEQ

E & E Project No.: 001688.OY14.25

Weather		Temperature		Site Conditions	
Clear:		Morning:	60 °f	Clean:	
Part Cldy:	x	Midday:	70 °F	Dusty:	x
Overcast:		Afternoon:	75 °F	Muddy:	
Rain:				Other:	
Fog:					
Snow:					
Other:					

CONTRACTOR(S)/SUBCONTRACTOR(S)

Contractor/Subcontractor	Crew Size	Remarks
SMC Building Erectors	2	None
Ampere Electric Co.	0	

VISITORS

Time In	Time Out	Name	Representing	Remarks

MAJOR EQUIPMENT CURRENTLY ON SITE	MATERIALS DELIVERED TO SITE

NONCONFORMANCE NOTED	WHO WAS NOTIFIED?
None noted.	

SAFETY CONCERNS NOTED	WHO WAS NOTIFIED?
None noted.	

WORK COMPLETED

1. SMC personnel worked on downspout installation and roof crown.

NOTES/ISSUES

None

Prepared By: J. Petersen

ecology and environment, inc.

DAILY FIELD REPORT NO.: 74

Date: 07/12/05 **Day:** Tuesday

Project Title: McCormick and Baxter Support Facility Modifications **Client:** ODEQ

E & E Project No.: 001688.OY14.25

Weather		Temperature		Site Conditions	
Clear:		Morning:	60 °f	Clean:	
Part Cldy:		Midday:	71 °F	Dusty:	x
Overcast:	x	Afternoon:	77 °F	Muddy:	
Rain:				Other:	
Fog:					
Snow:					
Other:					

CONTRACTOR(S)/SUBCONTRACTOR(S)

Contractor/Subcontractor	Crew Size	Remarks
SMC Building Erectors	0	None
Ampere Electric Co.	2	

VISITORS

Time In	Time Out	Name	Representing	Remarks

MAJOR EQUIPMENT CURRENTLY ON SITE	MATERIALS DELIVERED TO SITE
1. Bobcat 770 with auger.	

NONCONFORMANCE NOTED	WHO WAS NOTIFIED?
None noted.	

SAFETY CONCERNS NOTED	WHO WAS NOTIFIED?
None noted.	

WORK COMPLETED

1. Ampere Electric installed six interior light fixtures per drawing number 8.
2. Wilder utilized the Bobcat with auger attachment to dig ten shallow holes to the north of the hazardous materials storage area in preparation for the installation of the protective bollards.

NOTES/ISSUES

The newly placed buried electric conduit was encountered and broken during hole digging operation.

Prepared By: G. Jones

ecology and environment, inc.

DAILY FIELD REPORT NO.: 75

Date: 07/13/05 **Day:** Wednesday

Project Title: McCormick and Baxter Support Facility Modifications **Client:** ODEQ

E & E Project No.: 001688.OY14.25

Weather		Temperature		Site Conditions	
Clear:		Morning:	60 °f	Clean:	
Part Cldy:	x	Midday:	74 °F	Dusty:	x
Overcast:	x	Afternoon:	80 °F	Muddy:	
Rain:				Other:	
Fog:					
Snow:					
Other:					

CONTRACTOR(S)/SUBCONTRACTOR(S)

Contractor/Subcontractor	Crew Size	Remarks
SMC Building Erectors	0	None
Wilder Construction	2	
Ampere Electric Co.	2	

VISITORS

Time In	Time Out	Name	Representing	Purpose
10:15		Alexander Whitman	Ecology and Environment, Inc.	Weekly Progress Meeting
12:30		John Montgomery	Ecology and Environment, Inc.	Weekly Progress Meeting
12:00		Kevin Parrett	ODEQ	Weekly Progress Meeting

MAJOR EQUIPMENT CURRENTLY ON SITE	MATERIALS DELIVERED TO SITE
1. Bobcat 770 with auger.	

NONCONFORMANCE NOTED	WHO WAS NOTIFIED?
None noted.	

SAFETY CONCERNS NOTED	WHO WAS NOTIFIED?
None noted.	

WORK COMPLETED

1. Ampere Electric pulled wire through the conduit for the shop building.
2. Wilder Construction installed five bollards for the shop building.

NOTES/ISSUES

1. Ampere Electric repaired the underground electric and telephone conduit that was damaged while boring bollard holes for the shop building.

Prepared By: G. Jones

ecology and environment, inc.

DAILY FIELD REPORT NO.: 76

Date: 07/14/05 **Day:** Thursday

Project Title: McCormick and Baxter Support Facility Modifications **Client:** ODEQ

E & E Project No.: 001688.OY14.25

Weather		Temperature		Site Conditions	
Clear:	x	Morning:	59 °f	Clean:	
Part Cldy:	x	Midday:	76 °F	Dusty:	x
Overcast:		Afternoon:	87 °F	Muddy:	
Rain:				Other:	
Fog:					
Snow:					
Other:					

CONTRACTOR(S)/SUBCONTRACTOR(S)

Contractor/Subcontractor	Crew Size	Remarks
SMC Building Erectors	0	None
Wilder Construction	2	
Ampere Electric Co.	2	

VISITORS

Time In	Time Out	Name	Representing	Purpose

MAJOR EQUIPMENT CURRENTLY ON SITE	MATERIALS DELIVERED TO SITE

NONCONFORMANCE NOTED	WHO WAS NOTIFIED?
None noted.	

SAFETY CONCERNS NOTED	WHO WAS NOTIFIED?
None noted.	

WORK COMPLETED

1. Ampere Electric installed interior conduit and electrical receptacles.
2 Wilder Construction continued the installation of bollards for the shop building and hazardous materials storage area and are now 75% complete.

NOTES/ISSUES

None noted

Prepared By: G. Jones

ecology and environment, inc.

DAILY FIELD REPORT NO.: 77

Date: 07/15/05 **Day:** Friday

Project Title: McCormick and Baxter Support Facility Modifications **Client:** ODEQ

E & E Project No.: 001688.OY14.25

Weather		Temperature		Site Conditions	
Clear:	x	Morning:	63 °f	Clean:	
Part Cldy:		Midday:	78 °F	Dusty:	x
Overcast:		Afternoon:	92 °F	Muddy:	
Rain:				Other:	
Fog:					
Snow:					
Other:					

CONTRACTOR(S)/SUBCONTRACTOR(S)

Contractor/Subcontractor	Crew Size	Remarks
SMC Building Erectors	0	None
Wilder Construction	0	
Ampere Electric Co.	2	

VISITORS

Time In	Time Out	Name	Representing	Purpose

MAJOR EQUIPMENT CURRENTLY ON SITE	MATERIALS DELIVERED TO SITE

NONCONFORMANCE NOTED	WHO WAS NOTIFIED?
None noted.	

SAFETY CONCERNS NOTED	WHO WAS NOTIFIED?
None noted.	

WORK COMPLETED

1. Ampere Electric wired 90% of the lighting fixtures and wall receptacles.
2. Wilder Construction installed the under trailer septic tank.

NOTES/ISSUES

None noted

Prepared By: G. Jones

ecology and environment, inc.

DAILY FIELD REPORT NO.: 78

Date: 07/18/05 **Day:** Monday

Project Title: McCormick and Baxter Support Facility Modifications **Client:** ODEQ

E & E Project No.: 001688.OY14.25

Weather		Temperature		Site Conditions	
Clear:	x	Morning:	63 °f	Clean:	
Part Cldy:		Midday:	89 °F	Dusty:	x
Overcast:		Afternoon:	95 °F	Muddy:	
Rain:				Other:	
Fog:					
Snow:					
Other:					

CONTRACTOR(S)/SUBCONTRACTOR(S)

Contractor/Subcontractor	Crew Size	Remarks
SMC Building Erectors	0	None
Wilder Construction	1	
Ampere Electric Co.	0	

VISITORS

Time In	Time Out	Name	Representing	Purpose

MAJOR EQUIPMENT CURRENTLY ON SITE	MATERIALS DELIVERED TO SITE

NONCONFORMANCE NOTED	WHO WAS NOTIFIED?
None noted.	

SAFETY CONCERNS NOTED	WHO WAS NOTIFIED?
None noted.	

WORK COMPLETED

1. Wilder made an adjustment to the water supply line to the equipment trailers.

NOTES/ISSUES

None noted.

Prepared By: G. Jones

ecology and environment, inc.

DAILY FIELD REPORT NO.: 79

Date: 07/19/05 **Day:** Tuesday

Project Title: McCormick and Baxter Support Facility Modifications **Client:** ODEQ

E & E Project No.: 001688.OY14.25

Weather		Temperature		Site Conditions	
Clear:	x	Morning:	58 °f	Clean:	
Part Cldy:		Midday:	77 °F	Dusty:	x
Overcast:		Afternoon:	84 °F	Muddy:	
Rain:				Other:	
Fog:					
Snow:					
Other:					

CONTRACTOR(S)/SUBCONTRACTOR(S)

Contractor/Subcontractor	Crew Size	Remarks
SMC Building Erectors	0	None
Wilder Construction	0	
Ampere Electric Co.	2	

VISITORS

Time In	Time Out	Name	Representing	Purpose

MAJOR EQUIPMENT CURRENTLY ON SITE	MATERIALS DELIVERED TO SITE

NONCONFORMANCE NOTED	WHO WAS NOTIFIED?
None noted.	

SAFETY CONCERNS NOTED	WHO WAS NOTIFIED?
None noted.	

WORK COMPLETED

1. Ampere Electric installed both heaters, the louver and fan for the south end of the shop building, and completed the overhead light installations.

NOTES/ISSUES

None noted.

Prepared By: G. Jones

ecology and environment, inc.

DAILY FIELD REPORT NO.: 81

Date: 07/21/05 **Day:** Thursday

Project Title: McCormick and Baxter Support Facility Modifications **Client:** ODEQ

E & E Project No.: 001688.OY14.25

Weather		Temperature		Site Conditions	
Clear:	x	Morning:	60 °f	Clean:	
Part Cldy:		Midday:	78 °F	Dusty:	x
Overcast:		Afternoon:	92 °F	Muddy:	
Rain:				Other:	
Fog:					
Snow:					
Other:					

CONTRACTOR(S)/SUBCONTRACTOR(S)

Contractor/Subcontractor	Crew Size	Remarks
SMC Building Erectors	3	None
Wilder Construction	0	
Ampere Electric Co.	4	

VISITORS

Time In	Time Out	Name	Representing	Purpose

MAJOR EQUIPMENT CURRENTLY ON SITE	MATERIALS DELIVERED TO SITE

NONCONFORMANCE NOTED	WHO WAS NOTIFIED?
None noted.	

SAFETY CONCERNS NOTED	WHO WAS NOTIFIED?
None noted.	

WORK COMPLETED

1. Ampere Electric completed the installation of all electrical components 100% per contract drawings.
2. SMC installed the gables for the shop building.

NOTES/ISSUES

None noted.

Prepared By: G. Jones

ecology and environment, inc.

DAILY FIELD REPORT NO.: 82

Date: 07/22/05 **Day:** Friday

Project Title: McCormick and Baxter Support Facility Modifications **Client:** ODEQ

E & E Project No.: 001688.OY14.25

Weather		Temperature		Site Conditions	
Clear:		Morning:	74 °f	Clean:	x
Part Cldy:	x	Midday:	79 °F	Dusty:	
Overcast:		Afternoon:	82 °F	Muddy:	
Rain:				Other:	
Fog:					
Snow:					
Other:					

CONTRACTOR(S)/SUBCONTRACTOR(S)

Contractor/Subcontractor	Crew Size	Remarks
Overhead Door of Portland	2	None
Wilder Construction	1	
Ampere Electric Co.	0	

VISITORS

Time In	Time Out	Name	Representing	Purpose
9:10	10:15	Heidi Blichle	ODEQ	NAPL

MAJOR EQUIPMENT CURRENTLY ON SITE	MATERIALS DELIVERED TO SITE

NONCONFORMANCE NOTED	WHO WAS NOTIFIED?
None noted.	

SAFETY CONCERNS NOTED	WHO WAS NOTIFIED?
None noted.	

WORK COMPLETED

1. Overhead Door Company of Portland installed two garage doors for the shop building.

NOTES/ISSUES

The bank of ceiling lights on the north end of the building is not operational. E&E informed Wilder

Prepared By: G. Jones

ecology and environment, inc.

DAILY FIELD REPORT NO.: 84

Date: 07/26/05 **Day:** Tuesday

Project Title: McCormick and Baxter Support Facility Modifications **Client:** ODEQ

E & E Project No.: 001688.OY14.25

Weather		Temperature		Site Conditions	
Clear:	x	Morning:	73 °f	Clean:	
Part Cldy:		Midday:	82 °F	Dusty:	x
Overcast:		Afternoon:	91 °F	Muddy:	
Rain:				Other:	
Fog:					
Snow:					
Other:					

CONTRACTOR(S)/SUBCONTRACTOR(S)

Contractor/Subcontractor	Crew Size	Remarks
Overhead Door of Portland	0	None
Wilder Construction	1	
Ampere Electric Co.	0	

VISITORS

Time In	Time Out	Name	Representing	Purpose

MAJOR EQUIPMENT CURRENTLY ON SITE	MATERIALS DELIVERED TO SITE
	8 - eighty pound bags of concrete.

NONCONFORMANCE NOTED	WHO WAS NOTIFIED?
None noted.	

SAFETY CONCERNS NOTED	WHO WAS NOTIFIED?
None noted.	

WORK COMPLETED

1. Wilder Construction placed concrete inside the remaining bollards for the shop building.

NOTES/ISSUES

None

Prepared By: G. Jones

ecology and environment, inc.

DAILY FIELD REPORT NO.: 85

Date: 07/27/05 **Day:** Wednesday

Project Title: McCormick and Baxter Support Facility Modifications **Client:** ODEQ

E & E Project No.: 001688.OY14.25

Weather		Temperature		Site Conditions	
Clear:	x	Morning:	77 °f	Clean:	
Part Cldy:		Midday:	86 °F	Dusty:	x
Overcast:		Afternoon:	94 °F	Muddy:	
Rain:				Other:	
Fog:					
Snow:					
Other:					

CONTRACTOR(S)/SUBCONTRACTOR(S)

Contractor/Subcontractor	Crew Size	Remarks
Overhead Door of Portland	0	None
Wilder Construction	1	
Ampere Electric Co.	0	

VISITORS

Time In	Time Out	Name	Representing	Purpose

MAJOR EQUIPMENT CURRENTLY ON SITE	MATERIALS DELIVERED TO SITE
	8 - eighty pound bags of concrete.

NONCONFORMANCE NOTED	WHO WAS NOTIFIED?
None noted.	

SAFETY CONCERNS NOTED	WHO WAS NOTIFIED?
None noted.	

WORK COMPLETED

1. Wilder Construction painted (caution yellow) all of the bollards for the shop building and hazardous storage area.

NOTES/ISSUES

None

Prepared By: G. Jones

ecology and environment, inc.

DAILY FIELD REPORT NO.: 86

Date: 07/28/05 **Day:** Thursday

Project Title: McCormick and Baxter Support Facility Modifications **Client:** ODEQ

E & E Project No.: 001688.OY14.25

Weather		Temperature		Site Conditions	
Clear:	x	Morning:	59 °f	Clean:	
Part Cldy:		Midday:	78 °F	Dusty:	x
Overcast:		Afternoon:	85 °F	Muddy:	
Rain:				Other:	
Fog:					
Snow:					
Other:					

CONTRACTOR(S)/SUBCONTRACTOR(S)

Contractor/Subcontractor	Crew Size	Remarks
SMA Building Erectors	0	None
Wilder Construction	1	
Ampere Electric Co.	2	

VISITORS

Time In	Time Out	Name	Representing	Purpose

MAJOR EQUIPMENT CURRENTLY ON SITE	MATERIALS DELIVERED TO SITE
	Components for the shop building work bench.

NONCONFORMANCE NOTED	WHO WAS NOTIFIED?
None noted.	

SAFETY CONCERNS NOTED	WHO WAS NOTIFIED?
None noted.	

WORK COMPLETED

1. Ampere Electric corrected the punch list item regarding the non-functioning lights.
2. Wilder Construction removed concrete covering the monitoring wells within the shop building

NOTES/ISSUES

None

Prepared By: G. Jones

ecology and environment, inc.

DAILY FIELD REPORT NO.: 87

Date: 07/29/05 **Day:** Friday

Project Title: McCormick and Baxter Support Facility Modifications **Client:** ODEQ

E & E Project No.: 001688.OY14.25

Weather		Temperature		Site Conditions	
Clear:	x	Morning:	65 °f	Clean:	
Part Cldy:		Midday:	77 °F	Dusty:	x
Overcast:		Afternoon:	88 °F	Muddy:	
Rain:				Other:	
Fog:					
Snow:					
Other:					

CONTRACTOR(S)/SUBCONTRACTOR(S)

Contractor/Subcontractor	Crew Size	Remarks
SMA Building Erectors	0	None
Wilder Construction	1	
Ampere Electric Co.	0	

VISITORS

Time In	Time Out	Name	Representing	Purpose

MAJOR EQUIPMENT CURRENTLY ON SITE	MATERIALS DELIVERED TO SITE
	none

NONCONFORMANCE NOTED	WHO WAS NOTIFIED?
None noted.	

SAFETY CONCERNS NOTED	WHO WAS NOTIFIED?
None noted.	

WORK COMPLETED

1. Wilder Construction continued to address punch list items (see attached punch list).

NOTES/ISSUES

None

Prepared By: G. Jones

ecology and environment, inc.

DAILY FIELD REPORT NO.: 88

Date: 08/01/05 **Day:** Monday

Project Title: McCormick and Baxter Support Facility Modifications **Client:** ODEQ

E & E Project No.: 001688.OY14.25

Weather		Temperature		Site Conditions	
Clear:		Morning:	60 °f	Clean:	
Part Cldy:	x	Midday:	67 °F	Dusty:	x
Overcast:		Afternoon:	78 °F	Muddy:	
Rain:				Other:	
Fog:					
Snow:					
Other:					

CONTRACTOR(S)/SUBCONTRACTOR(S)

Contractor/Subcontractor	Crew Size	Remarks
SMA Building Erectors	0	None
Wilder Construction	0	
Ampere Electric Co.	1	

VISITORS

Time In	Time Out	Name	Representing	Purpose

MAJOR EQUIPMENT CURRENTLY ON SITE	MATERIALS DELIVERED TO SITE
	none

NONCONFORMANCE NOTED	WHO WAS NOTIFIED?
None noted.	

SAFETY CONCERNS NOTED	WHO WAS NOTIFIED?
None noted.	

WORK COMPLETED

1. Ampere Electric personnel installed the correct thermostat for the exhaust fan and louvers.

NOTES/ISSUES

There are two items not completed, remaining on the punch list.(Item # 1. complete installation of there shop building work bench). (Item # 2 correct plumbing connection to the decontamination trailer).

Prepared By: G. Jones

ecology and environment, inc.

DAILY FIELD REPORT NO.: 90

Date: 08/03/05 **Day:** Wednesday

Project Title: McCormick and Baxter Support Facility Modifications **Client:** ODEQ

E & E Project No.: 001688.OY14.25

Weather		Temperature		Site Conditions	
Clear:	x	Morning:	61 °F	Clean:	x
Part Cldy:		Midday:	87 °F	Dusty:	
Overcast:		Afternoon:	94 °F	Muddy:	
Rain:				Other:	
Fog:					
Snow:					
Other:					

CONTRACTOR(S)/SUBCONTRACTOR(S)

Contractor/Subcontractor	Crew Size	Remarks
SMA Building Erectors	1	None
Wilder Construction	0	
Ampere Electric Co.	0	

VISITORS

Time In	Time Out	Name	Representing	Purpose
11:30	5:15	Kevin Parrett	DEQ	Weekly Progress Meeting for CAP
11:30	3:00	John Montgomery	Ecology and Environment, Inc.	Weekly Progress Meeting for CAP
12:00	4:00	Chad Nancarrow	Ecology and Environment, Inc.	Weekly Progress Meeting for CAP

MAJOR EQUIPMENT CURRENTLY ON SITE	MATERIALS DELIVERED TO SITE
	none

NONCONFORMANCE NOTED	WHO WAS NOTIFIED?
None noted.	

SAFETY CONCERNS NOTED	WHO WAS NOTIFIED?
None noted.	

WORK COMPLETED

1. SMA Building Erectors installed the butler building gutter hangers.

NOTES/ISSUES

All shop building erection work is complete as of today. Wilder Construction has not completed the installation of the work bench for the building

Prepared By: G. Jones

E Photodocumentation

PHOTOGRAPH IDENTIFICATION SHEET

McCormick & Baxter Support Facility Modifications
Project No. 002688.OY21.29.03

Photo No.	Date	Time	By	Direction	Description
1	4/04/05	11:48	GJ	S	Relocating existing field trailers.
2	4/05/05	10:53	GJ	SE	Excavated trench for new water main.
3	4/08/05	10:57	GJ	SE	New water main installed in trench.
4	4/08/05	10:50	GJ	N	New hydrant with concrete thrust block.
5	4/11/05	14:14	GJ	N	Pressure testing new water distribution system.
6	4/08/05	10:53	GJ	Down	New water valve with concrete thrust block.
7	4/12/05	11:26	GJ	SW	Pressure testing new service connections.
8	4/08/05	11:08	GJ	S	Installing backflow valve.
9	4/08/05	11:27	GJ	Down	Concrete thrust block for elbow to backflow valve.
10	4/11/05	14:13	GJ	S	Prepared subgrade for support facility area.
11	4/08/05	10:51	GJ	Down	Forms for shop sump.
12	4/15/05	14:17	GJ	N	Concrete piers for shop building columns.
13	6/21/05	11:01	GJ	E	Shop building columns.
14	6/22/05	12:45	GJ	E	Shop building framing.
15	6/24/05	16:26	GJ	E	Shop building with roof insulation and panels partially installed.
16	9/26/05	07:57	LK	E	Newly paved support area.
17	2/01/06	08:20	LK	E	Completed shop building.
18	2/14/06	09:36	LK	SE	Hazardous waste storage area (note, cover installed under a different contract).
19	2/14/06	09:37	LK	Down	Sump for hazardous waste storage area.
20	2/14/06	09:41	LK	SE	Interior of new shop building.
21	2/14/06	09:45	LK	Up	Powered louver with fan in shop building.
22	2/14/06	09:46	LK	Up	Ceiling-mounted heater in shop building.
23	2/14/06	09:42	LK	SW	Power center and breaker panel in shop building.
24	2/14/06	09:51	LK	N	Main electrical breaker box.
25	2/14/06	10:05	LK	N	New utility pole.
26	2/14/06	10:05	LK	S	New electric meter (mounted on new utility pole).
27	2/14/06	09:35	LK	NE	New luminaire for support facility area.
28	2/14/06	09:48	LK	Down	Water valve and service lines vault.
29	2/14/06	09:55	LK	E	Backflow valve vault.
30	2/14/06	09:33	LK	E	New tire wash.

Key:
No. = Number
GJ = Greg Jones
LK = Lenna Kennard
N = North
NE = Northeast
NW = Northwest
S = South
SE = Southeast
SW = Southwest
E = East
W = West

Photo 1 Relocating existing field trailers.

Photo 2 Excavated trench for new water main.

Photo 3 New water main installed in trench.

Photo 4 New hydrant with concrete thrust block.

Photo 5 Pressure testing new water distribution system.

Photo 6 New water valve with concrete thrust block.

Photo 7 Pressure testing new service connections.

Photo 8 Installing backflow valve.

Photo 9 Concrete thrust block for elbow to backflow valve.

Photo 10 Prepared subgrade for support facility area.

Photo 11 Forms for shop sump.

Photo 12 Concrete piers for shop building columns.

Photo 13 Shop building columns.

Photo 14 Shop building framing.

Photo 15 Shop building with roof insulation and panels partially installed.

Photo 16 Newly paved support area.

Photo 17 Completed shop building.

Photo 18 Hazardous waste storage area (note, cover installed under a different contract).

Photo 19 Sump for hazardous waste storage area.

Photo 20 Interior of new shop building.

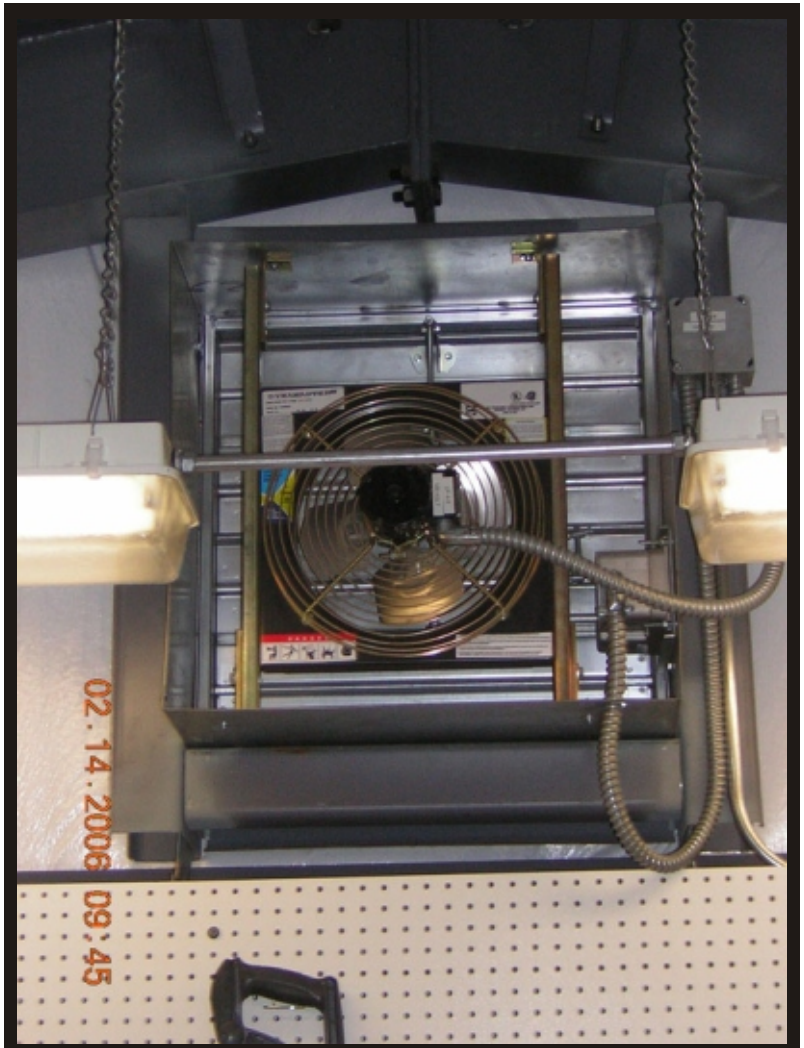


Photo 21 Powered louver with fan in shop building.

Photo 22 Ceiling-mounted heater in shop building.

Photo 23 Power center and breaker panel in shop building.

Photo 24 Main electrical breaker box.

Photo 25 New utility pole.

Photo 26 New electric meter (mounted on new utility pole).

Photo 27 New luminaire for support facility area.

Photo 28 Water valve and service lines vault.

Photo 29 Backflow valve vault.

Photo 30 New tire wash.

PHOTOGRAPH IDENTIFICATION SHEET

McCormick & Baxter Support Facility Modifications
Project No. 002688.OY21.29.03

Photo No.	Date	Time	By	Direction	Description
1	4/04/05	11:48	GJ	S	Relocating existing field trailers.
2	4/05/05	10:53	GJ	SE	Excavated trench for new water main.
3	4/08/05	10:57	GJ	SE	New water main installed in trench.
4	4/08/05	10:50	GJ	N	New hydrant with concrete thrust block.
5	4/11/05	14:14	GJ	N	Pressure testing new water distribution system.
6	4/08/05	10:53	GJ	Down	New water valve with concrete thrust block.
7	4/12/05	11:26	GJ	SW	Pressure testing new service connections.
8	4/08/05	11:08	GJ	S	Installing backflow valve.
9	4/08/05	11:27	GJ	Down	Concrete thrust block for elbow to backflow valve.
10	4/11/05	14:13	GJ	S	Prepared subgrade for support facility area.
11	4/08/05	10:51	GJ	Down	Forms for shop sump.
12	4/15/05	14:17	GJ	N	Concrete piers for shop building columns.
13	6/21/05	11:01	GJ	E	Shop building columns.
14	6/22/05	12:45	GJ	E	Shop building framing.
15	6/24/05	16:26	GJ	E	Shop building with roof insulation and panels partially installed.
16	9/26/05	07:57	LK	E	Newly paved support area.
17	2/01/06	08:20	LK	E	Completed shop building.
18	2/14/06	09:36	LK	SE	Hazardous waste storage area (note, cover installed under a different contract).
19	2/14/06	09:37	LK	Down	Sump for hazardous waste storage area.
20	2/14/06	09:41	LK	SE	Interior of new shop building.
21	2/14/06	09:45	LK	Up	Powered louver with fan in shop building.
22	2/14/06	09:46	LK	Up	Ceiling-mounted heater in shop building.
23	2/14/06	09:42	LK	SW	Power center and breaker panel in shop building.
24	2/14/06	09:51	LK	N	Main electrical breaker box.
25	2/14/06	10:05	LK	N	New utility pole.
26	2/14/06	10:05	LK	S	New electric meter (mounted on new utility pole).
27	2/14/06	09:35	LK	NE	New luminaire for support facility area.
28	2/14/06	09:48	LK	Down	Water valve and service lines vault.
29	2/14/06	09:55	LK	E	Backflow valve vault.
30	2/14/06	09:33	LK	E	New tire wash.

Key:
No. = Number
GJ = Greg Jones
LK = Lenna Kennard
N = North
NE = Northeast
NW = Northwest
S = South
SE = Southeast
SW = Southwest
E = East
W = West